ORDER NO. VRD8709M152

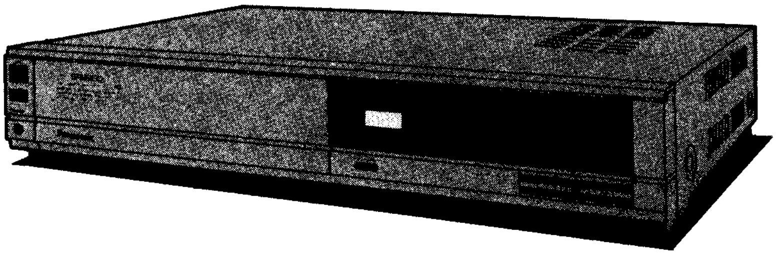
Service Manual

Video Cassette Recorder

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List

Panasonic VHS PAL Hi-Fi HQ

NV-H75EG



SPECIFICATIONS

ITEM	SPECIFICATION
POWER	SOURCE: 220V 50/60Hz
	CONSUMPTION: 29 watts
RECORDING SYSTEM	2 rotary heads, helical scanning system
	PAL
TV TUNER SYSTEM	VHF: CH E2~CH S41 (PAL/SECAM B) 75Ω unbalanced UHF: CH 21~CH 69 (PAL/SECAM G) 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36 ± 4 (PAL/SECAM G) 73^{+2}_{-3} dBμ, 75Ω terminated
VIDEO	HEADS: 4 rotary heads 1 pair for recording, playback (L-R heads) 1 pair for trick play (L′-R′ heads)
	INPUT: VIDEO IN Connector (BNC type) 1.0Vp-p, 75Ω terminated EURO AV Connector (21 pin) 1.0Vp-p, 75Ω terminated
	OUTPUT: VIDEO OUT Connector (BNC type) 1.0Vp-p, 75Ω terminated EURO AV Connector (21 pin) 1.0Vp-p, 75Ω terminated
AUDIO	HEAD: 1 Stationary head (Normal Audio) 2 rotary heads (Hi-Fi 2CH)
	INPUT: AUDIO IN Connector (Phono type) More than −10dBV (316mV), more than 50kΩ EURO AV Connector (21 pin) More than −10dBV (316mV), more than 10kΩ
AUDIO	OUTPUT: AUDIO OUT Connector (Phono type) −8dBV (400mV), Less than 1kΩ EURO AV Connector (21 pin) −6dBV (500mV), Less than 1kΩ HEAD PHONE Jack −30dBV, 8Ω
	TRACK: 1 track (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)
TAPE FORMAT	VHS Cassette tape (Tape width 12.7mm)
TAPE SPEED	23.39mm/s Record/Playback Time: 4 hours with 240min. type tape FF/REW Time 5.5min. with 180min. type tape
DIMENSIONS	430(W) × 82(H) × 357(D) mm
WEIGHT	5.9kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Infra-red remote controller 2 pc. Audio Cables 1 pc. Digital Scanner Case 1 pc. Digital Scanner 1 pc. Programme sheet 1 pc. AC Mains Lead 1 pc. Cleaning Brush

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...
Section 4 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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REMARKS

1. It is possible to receive, record and play back colour broadcasts from East Germany (DDR) on this video recorder.
2. When a video tape that was recorded with a colour TV broadcast from East Germany on this VTR is played back on a SECAM (France) or on a PAL VTR, the picture may be in black and white.
3. When a video tape recorded on a SECAM (France) VTR or a SECAM (France) prerecorded video tape is played back on this VTR, the picture is in black and White.

SECTION 1
GENERAL DESCRIPTIONS

1-1. FEATURES

1. 1-Month Calendar Timer

The clock/timer of the VTR is programmed with the calendar up to the end of 2002, so it knows exactly what day of the week it is on any given date. Programming of as many as 8 timer recordings is possible up to one month in advance.

2. VPS (Video Programme System)

The Video Programme System is an extremely convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time is different from the scheduled time.

3. Auto Operation

The extremely convenient Auto Operation functions of this VTR include Auto Start and Auto Play when a recorded cassette is inserted, Auto Eject which indicates that an inserted cassette is not suitable for recording, Power-Off Eject for ejecting a cassette even with the VTR off, and Auto Rewind at the end of a tape. If the VTR On/Off Switch is pressed during the rewind mode including Auto Rewind, the VTR will eject the cassette and turn itself off when rewinding is completed.

4. Super OTR Function (One-Touch Timer Recording)

This convenient function makes it possible to easily programme the VTR for recording of TV programmes with immediate start or with start within 24 hours by precisely setting the starting time and ending time to the desired minute. When the recording ends, the VTR will automatically turn itself off.

5. HQ (High Quality) Picture System

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

6. Lap Time Counter

The new Lap Time Counter is a great improvement over the approximate counter systems of conventional VTRs. It gives you an exact reading of the elapsed tape time in hours, minutes and seconds, and makes it easy to calculate the tape time left on a cassette.

7. Programmable Remote Controller

8. Digital Scanner

This Digital Scanner lets you programme timer recordings by tracing the corresponding bar codes on the supplied Programming Sheet and then transmitting the data to the VTR.

9. Time Search

It is possible to locate the desired scene directly by inputting the hour, minute and second of that scene.

10. VHS Index Search System

With the Index Search function, up to 20 addresses (places where an index signal is recorded) can be skipped to directly locate the beginning of the desired programme in forward or reverse direction in the Fast Forward or Rewind mode.

11. Intro Scan Function

The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another.

12. Hi-Fi Stereo System

13. Recording and Playback of Stereo, Bilingual and Monaural TV Programmes

The new hi-fi stereo system in combination with the built-in multiplex tuner can process audio two-channel as well as monaural signals for both recording and playback. Even if the TV set used is of the mono type, stereo or bilingual sound of recorded programmes or sound of TV programmes, being received on the VTR tuner and played back through the TV set can be reproduced via a connected hi-fi stereo system with external speakers.

14. Recording and Playback of "Simulcast" Sound

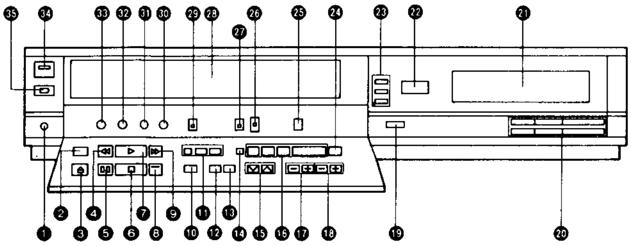
This VTR allows recording and playback of the stereo sound of TV programmes broadcast via "Simulcast" by connecting an FM tuner to the Audio Input Sockets.

15. Super Still, Super Still Advance and Double Super Fine Slow Playback

Super Still, Super Still Advance and Double Super Fine Slow Playback are possible with superb picture quality free from noise and jitter.

1-2. CONTROLS AND COMPONENTS

FRONT



① Headphones Socket

② Audio Playback Mode Selector

Audio playback mode selector can be used to select the desired sound mode. At the every push of this button,the audio playback mode changes as follows:

→STEREO→LEFT→RIGHT→NORMAL AUDIO→

For instance,when a bilingual,stereo or mono programme is received,the audio playbacck mode selector can be selected to the desired sound mode as shown below.

	Playback of Programmes Recorded on this VTR (or another VHS Hi-Fi Video Recorder)		
	Stereo Programmes	Bilingual Programmes	Mono Programmes
STEREO	Left+Right Channels(Stereo)	CH1 from Left CH2 from Right	Mono
LEFT	Left Channel	Channel 1 (Main)	Mono
RIGHT	Right Channel	Channel 2 (Sub)	Mono
NORMAL	Mono	Channel 1 (Main)	Mono

	Playback of Programmes Recorded on a Conventional VHS Stereo Video Recorder	
	Stereo Programmes	Bilingual Programmes
STEREO	———	———
LEFT	———	———
RIGHT	———	———
NORMAL	Left+Right Mixed	CH1+CH2 Mixed

③ Eject Button (▲)

④ Rewind ◀◀/Review ⏪ Button

⑤ Pause/Still Button (❚❚)

⑥ Stop Button (■)

⑦ Play Button (▶)

⑧ Record Button (●)

⑨ Fast Forward ▶▶/Cue ⏩ Button

⑩ Euro AV Button

⑪ Tuner Set-up Controls

The tuner in the VTR can be preset with up to 32 stations.

VHF		UHF	
I	III	H	U
E2–E4	S4–E12	S11–S41	21–69

⑫ Memory/Search Button

When this button is pressed once, the Memory Indicator "M" will light up, and when it is pressed one more time, the Search Indicator "S" will appear instead. When it is pressed a third time the Search Indicator "S" will disappear.

⑬ Reset/Index Button

⑭ Clock Button

⑮ Channel Selection Up and Down Buttons

⑯ Timer Controls

⑰ OTR On Buttons

⑱ OTR Off Buttons

⑲ Control Panel Open Button

⑳ Audio Rec Level Controls

㉑ Multi-Function Display

㉒ Infra-red Remote Control Receiver

㉓ Audio Recording Mode Indicators

㉔ VPS Button

The VPS Button can be used which the TV programmes scheduled for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time is different from the scheduled time.

㉕ Timer Record Button

㉖ Input Signal Selector

㉗ MPX Filter Switch

If the sound is impaired by high frequency distortion when recording from an FM tuner, the MPX Filter Switch should be set to "On" position.

㉘ Cassette Compartment

㉙ Edit Switch

When the Dubbing (copying) from one video cassette to another VTR and receiving weak TV broadcasts from Tuner, the Edit Switch should be set to "On" position.

㉚ Picture Sharpness Control

㉛ Slow Tracking Control

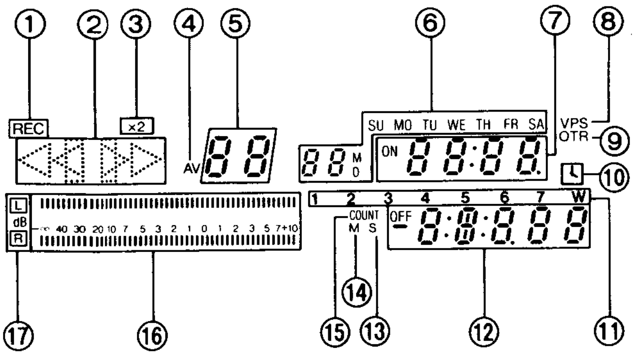
㉜ Tracking Control

㉝ Headphones Output Level Control

㉞ VTR On/Off Switch with Indicator

㉟ Cassette-in Indicator

MULTI-FUNCTION DISPLAY



① Recording Indicator

② Tape Running Display

③ Double Speed Indicator

④ Euro AV Indicator

⑤ Channel Display

⑥ Date Display

⑦ Clock Display

⑧ VPS Indicator

⑨ OTR Indicator

⑩ Timer Recording Indicator

⑪ Timer Programme Number

⑫ Lap Time Counter

⑬ Search Indicator

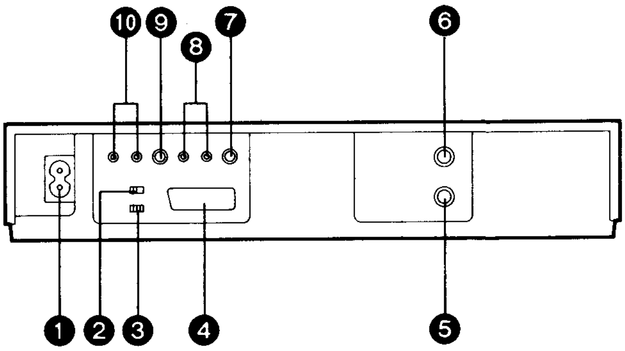
⑭ Memory Indicator

⑮ Tape Counter Indicator

⑯ Audio Level Meter

⑰ Audio Playback Mode Indicators

REAR



❶ AC Mains Lead Socket

❷ DBS Switch

With this switch, the video signal can be switched over to the Euro AV Connector. When a satellite TV decoder (descrambler) is connected, the satellite signal can be recorded by pressing the Euro AV Button (Euro AV mode) or displayed on the TV set.

❸ Test Signal Switch

❹ Euro AV Socket

❺ RF Input Socket

❻ RF Output Socket

❼ Video Output Socket

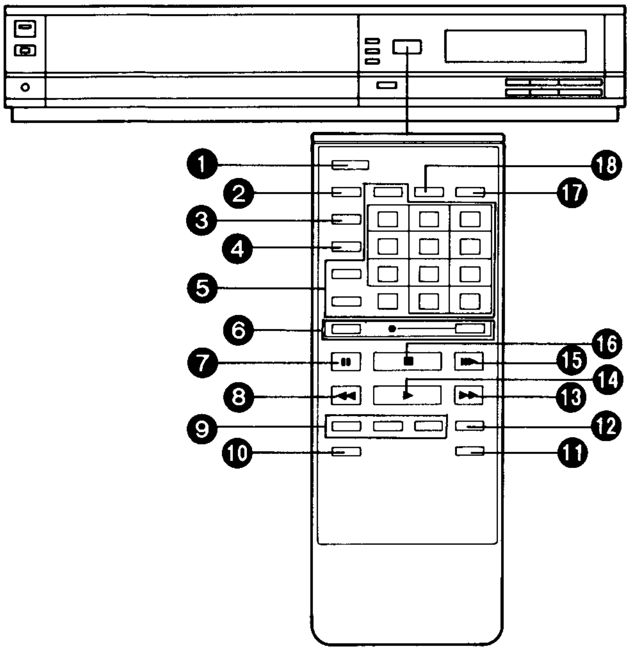
❽ Audio Output Sockets

❾ Video Input Socket

❿ Audio Input Sockets

1-3. PROGRAMMABLE REMOTE CONTROLLER

Unit Number: VEQ0615



① **VTR On/Off Button**

② **Audio Select Button**

③ **Memory/Search Button**

④ **Reset/Index Button**

⑤ **Timer Recording & Programme Position Selector Buttons**

⑥ **Timer Recording Buttons**

⑦ **Pause/Still Button (❚❚)**

⑧ **Rewind ◀◀/Review [◀◀] Button**

⑨ **Slow Buttons**
When this button is pressed, the unit will play back the tape in slow−motion at 1/10 of normal speed. The slow playback speed can be varied between 1/25 and 1/5 of normal speed by using the "+" and "−" Buttons.

⑩ **Reverse Play Button**

⑪ **Intro Scan Button**

⑫ **Double Speed Playback Button (×2)**

⑬ **Fast Forward ▶▶/Cue [▶▶] Button**

⑭ **Play Button (▶)**

⑮ **Still Advance Button (❙❙▶)**

⑯ **Stop Button (■)**

⑰ **Time Search Button**

⑱ **+/− Button**

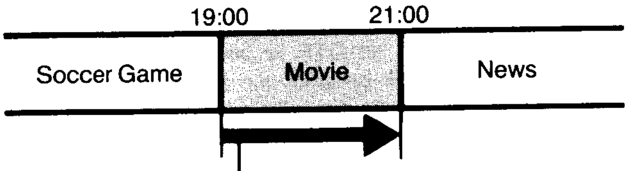
Note:
- The infra-red beam should be transmitted directly at the Infra-red Remote Control Receiver on the front of the VTR.
- Direct sunlight may interfere with the beam.
- The lightsensing angle of the Infra-red Remote Control Receiver window in the VTR is about 60°.
- The unit should be used within a range of about 7 meters from the front of the VTR.

1-4. VPS (VIDEO PROGRAMME SYSTEM)

The Video Programme System (VPS) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

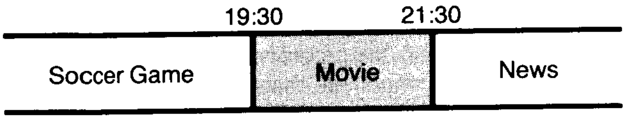
Example 1: Delayed Start of the Desired Programme

- **Programmed Start and End Times for Timer Recording**

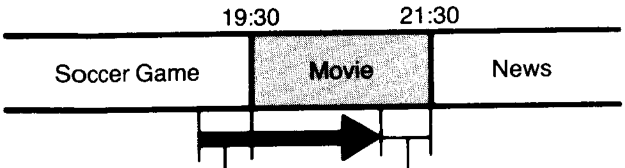


TV Programme to be timer-recorded

- **Actual Broadcasting Time**
  Soccer Game ends 30 minutes late.



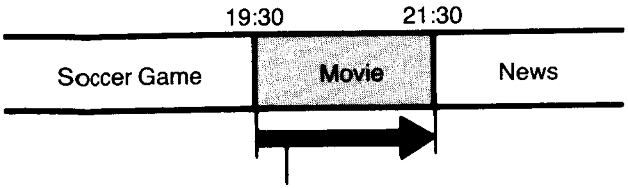
- **Recording Result without VPS**



End of preceding programme is recorded.

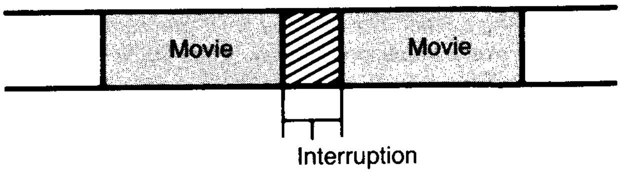
End of desired programme is not recorded.

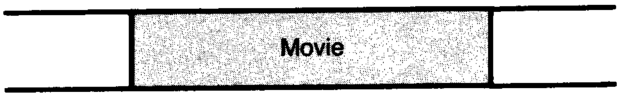
- **Recording Result with VPS**



Desired programme is recorded precisely from beginning to end.

Example 1: Desired Programme is Interrupted



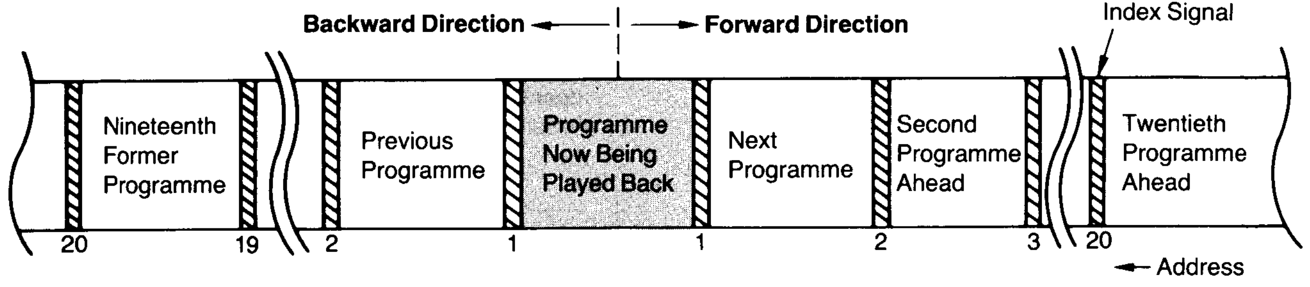


The interrupting part is skipped and the desired programme is recorded precisely from beginning to end.

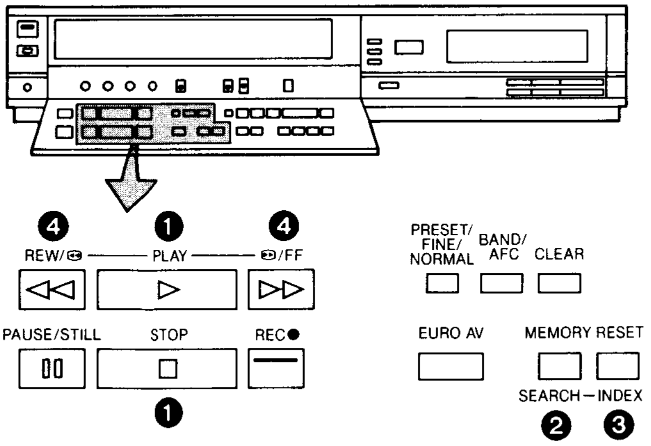
- If the actual broadcasting times of timer recordings overlap (regardless of whether they are VPS-controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the VPS signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular VPS signal, the timer recording will be performed in the normal mode (without VPS) even if it was programmed for VPS.

1-5. VHS INDEX SEARCH SYSTEM

How to Count the Addresses


Backward Direction
Forward Direction
Index Signal
Nineteenth Former Programme
Previous Programme
Programme Now Being Played Back
Next Programme
Second Programme Ahead
Twentieth Programme Ahead
20
19
2
1
1
2
3
20
Address

With the Index Search function, up to 20 addresses (places where an index signal is recorded) can be skipped to directly locate the beginning of the desired programme in forward or reverse direction in the Fast Forward or Rewind mode.

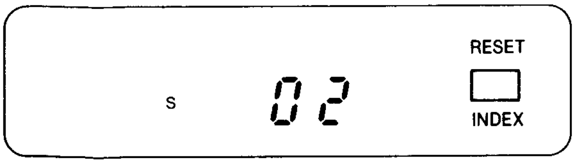

❹
❶
❹
REW/⏪
PLAY
⏩/FF
PAUSE/STILL
STOP
REC●
❶
PRESET/ FINE/ NORMAL
BAND/ AFC
CLEAR
EURO AV
MEMORY RESET
SEARCH – INDEX
❷
❸

A special index signal (for use of the VHS Index Search function) is automatically recorded every time the Record Button is pressed. If you want to record an additional index signal during the recording of a programme, press the Record Button again at the desired point.

❶ Press the Play Button (▶) or Stop Button (■).

❷ Press the Memory/Search Button twice.
- The indication "S" appears on the Multi-Function Display.

❸ Repeatedly press the Reset/Index Button to select the desired address.
The number of the selected address is shown on the Multi-Function Display.

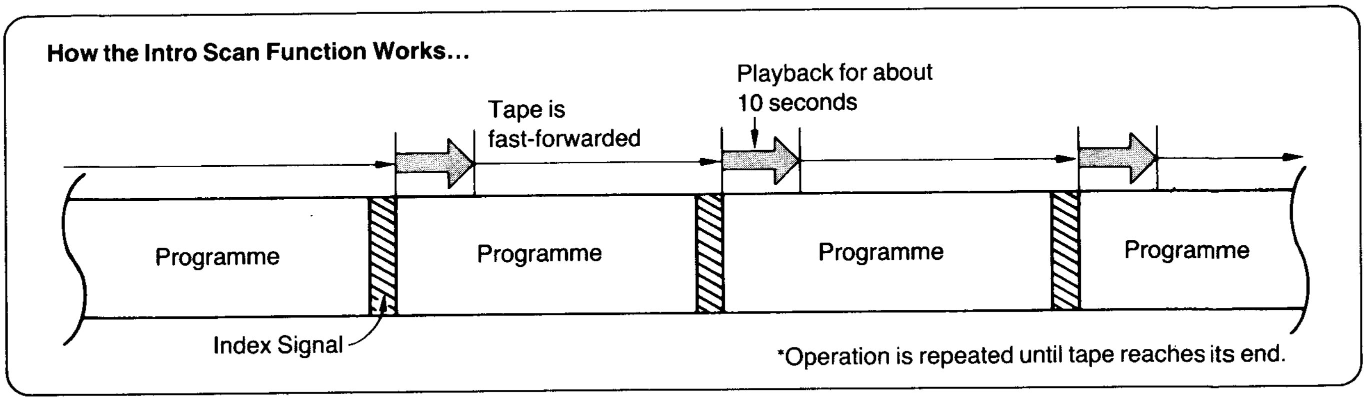

S
02
RESET
INDEX

❹ Press the Rewind ◀◀/Review ⏪ or Fast Forward ▶▶/Cue ⏩ Button to start the VHS Index Search function (the VTR will switch to the rewind or fast-forward mode).

- Every time an index signal (address) is skipped the number in the Address Indication decreases by one.
- When the preset address is reached, the Tape Counter Indication will appear in place of the Address Indication, and the normal playback will start on other VTRs which do not have this function.
- To abort the Index Search function midway, press the Play or the Stop Button.

- If the recording is stopped temporarily by pressing the Pause Button and is later resumed the index signal will not be recorded at that position.
- It is impossible to record only index signals onto a tape that has already been recorded.
- If a tape position without any recording is passed during the Index Search function, that position may be counted as an address.
- The Index Search function can only count the addresses correctly, if the index signals are spaced at least 2 minutes in the mode.
- If the Index Search function is started extremely close to the beginning of the next programme (address) or from the beginning of the tape, the first address may not be counted.

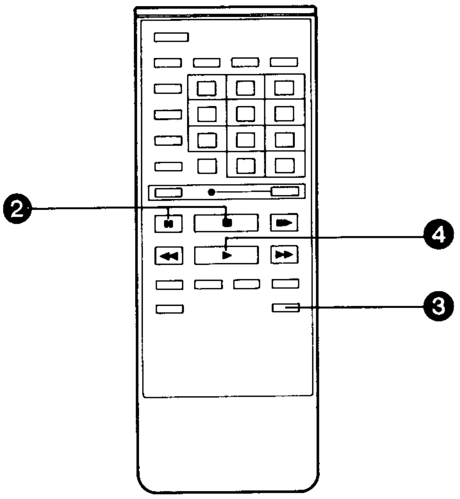
1-6. INTRO SCAN FUNCTION


How the Intro Scan Function Works...

Tape is fast-forwarded
Playback for about 10 seconds
Programme
Programme
Programme
Programme
Index Signal
*Operation is repeated until tape reaches its end.

The Intro Scan function plays back the first 10 seconds of each programme (recorded with index signal) on a tape one after another. This is convenient for quick checking what programmes are on a tape, or to find the desired instalment of a TV series you have recorded on a tape.

Convenient Intro Scan Operation with the Remote Controller



❶ Insert a video cassette on which index signals are recorded.

❷ Put the VTR in the stop mode or the still playback mode.

❸ Press the Intro Scan Button.
("S" mark will light up in the Multi-Function Display and the Intro Scan will start.)

❹ When the desired scene is reached, press the Play Button.

Intro Scan Operation on the VTR

① Insert a video cassette.
(Put the VTR in the stop mode.)

② Press the Memory/Search Button twice.
("S" mark appears.)

③ Press the Fast Forward ▶▶/Cue [▶▶] Button.
(The Intro Scan starts.)

④ When the desired scene is reached, press the Play Button.

- The Intro Scan function may not be activated for the first programme recorded close to the beginning of the tape.
- During the Intro Scan, if there is a portion without any recording on the tape, the Intro Scan function will be activated at that position to play back the tape for about 10 seconds, and the Intro Scan will then continue.
- The Intro Scan function may not be activated, if the interval between programme starts is less than 2 minutes in the mode.
- If a portion without any recording on the tape continues for more than about 50 minutes in the mode.

SECTION 2
ADJUSTMENT PROCEDURES

2-1. MECHANICAL ADJUSTMENT PROCEDURES

This Mechanical Chassis of these models are the same as the G Mechanical Chassis.
Therefore please refer to the Service Manual G Mechanical Chassis (Order No. VRD8701105).

2-2. DISASSEMBLY METHOD

2-2-1. DISASSEMBLY FLOWCHART

This flowchart indicates disassembly steps of the cabinet parts and the Circuit Boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

Note:
When removing the Front Panel, be careful to avoid any damages for the locking portions of the panel.

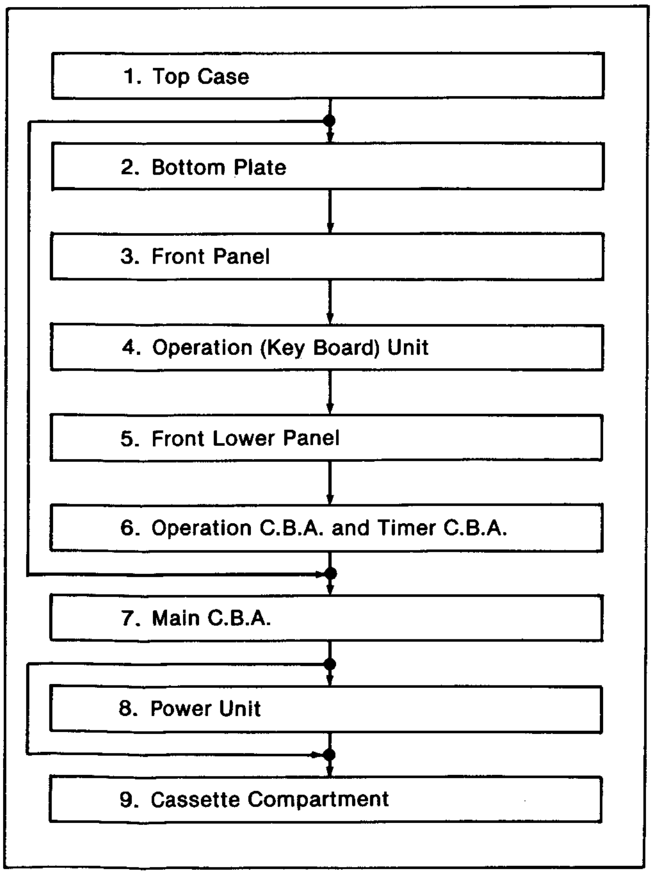

1. Top Case
2. Bottom Plate
3. Front Panel
4. Operation (Key Board) Unit
5. Front Lower Panel
6. Operation C.B.A. and Timer C.B.A.
7. Main C.B.A.
8. Power Unit
9. Cassette Compartment

FIG.D1

2-2-2. DETAIL OF DISASSEMBLY METHOD

1. Removal of the Top Case

Remove the 4 screws (A) then carefully lift the rear of the Top Case to remove.

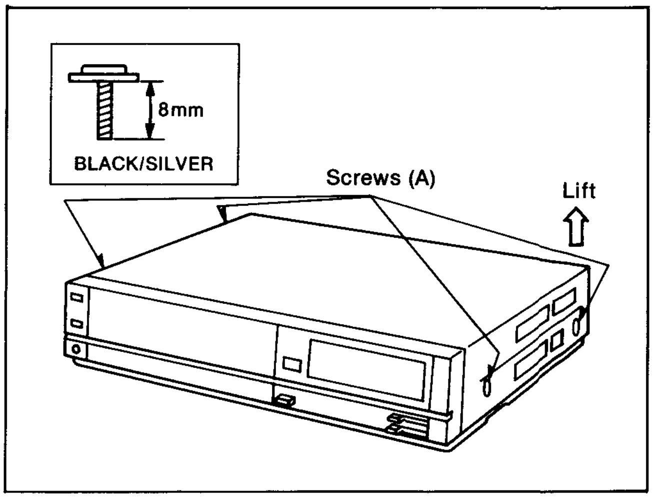

8mm
BLACK/SILVER
Screws (A)
Lift

FIG.D2

2. Removal of the Bottom Plate

Place the deck upside down so that the bottom side faces upward.
Then remove the 8 screws (B).

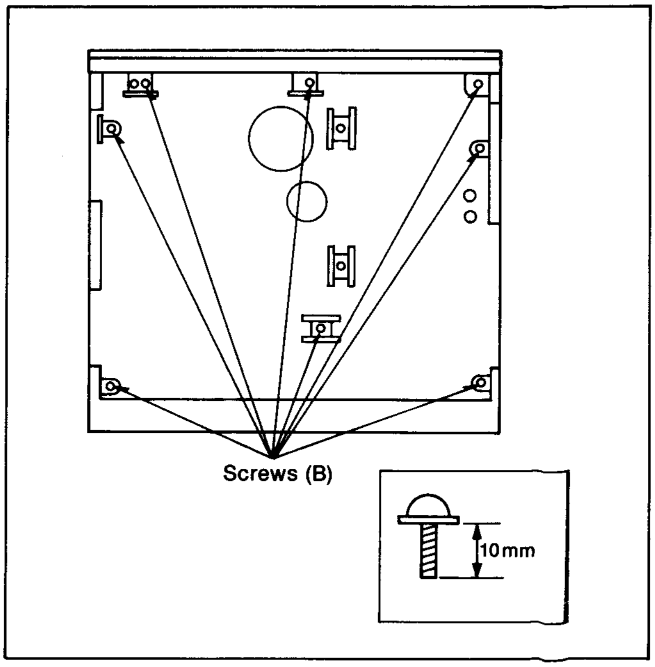

Screws (B)
10mm

FIG.D3

Note:
Place the cushion under the deck to avoid any damages.

3. Removal of the Front Panel

Open the Operation (key Board) Unit and remove the 3 screws (C) and unlock the 5 locking portions (D).
Then hold the top portion of the panel and turn it toward the front side of the deck to remove.

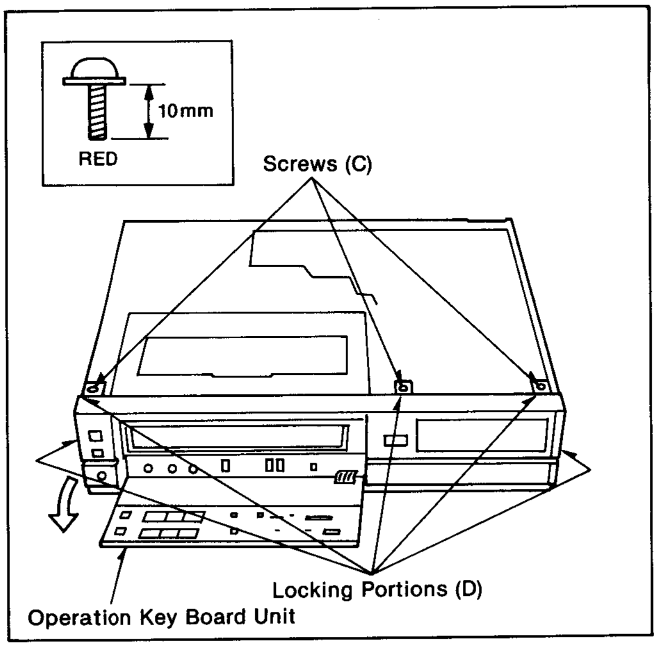

10mm
RED
Screws (C)
Locking Portions (D)
Operation Key Board Unit

FIG.D4

4. Removal of the Operation (key Board) Unit

Remove the 2 screws (E).
Disconnect the connector P7504(F) and remove the flexible wire.
Then carefully remove the Operation (key Board) Unit.

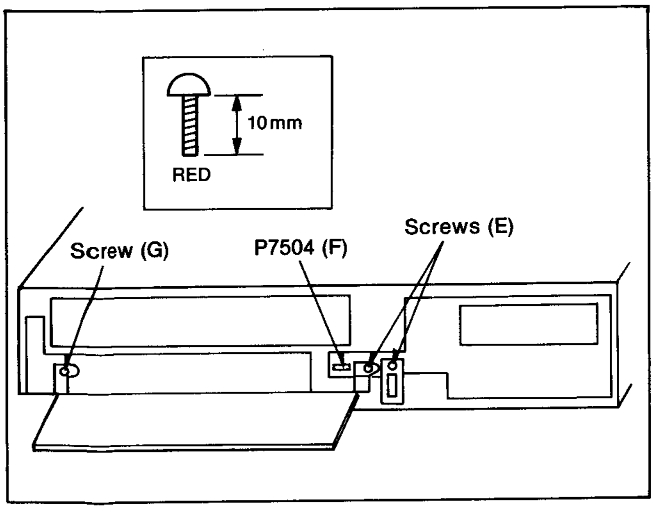

10mm
RED
Screw (G)
P7504 (F)
Screws (E)

FIG.D5

5. Removal of the Front Lower Panel.

Place the deck up side down so that the bottom side faces upward.
Then remove the 1 screw (G) and unlock the 3 locking portions (H).

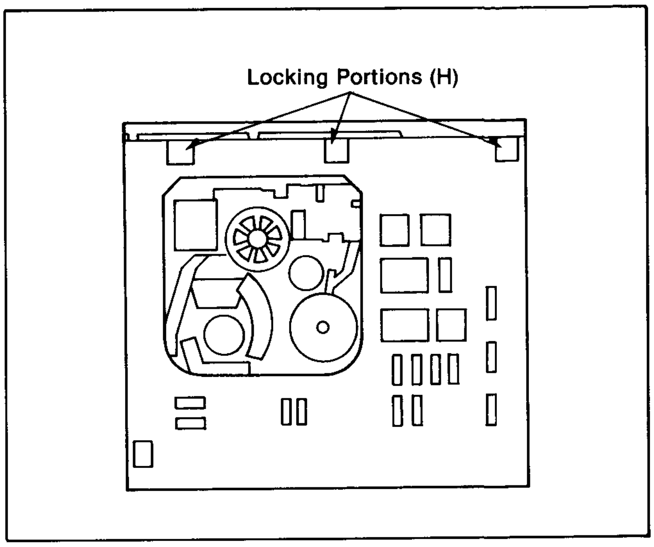

Locking Portions (H)

FIG.D6

Note:
Place the cushion under the deck to avoid any damages.

6. Removal of the Operation C.B.A. and Timer C.B.A.

Remove the 4 screws (I) and unlock the 3 locking portions (J).

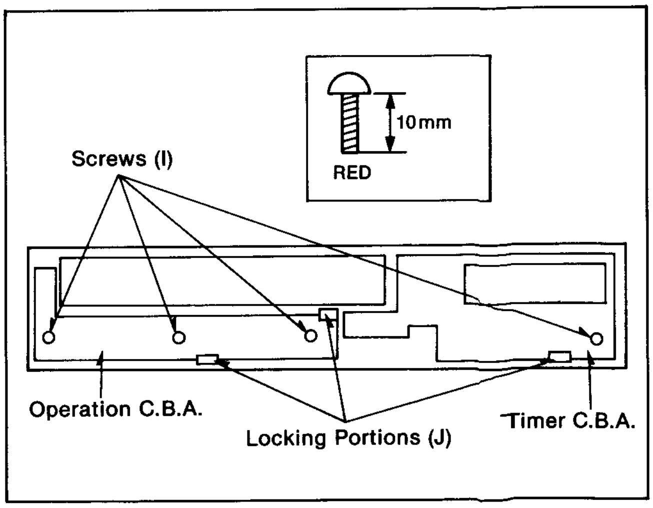

Screws (I)
10mm
RED
Operation C.B.A.
Locking Portions (J)
Timer C.B.A.

FIG.D7

7. Removal of the Main C.B.A.

Remove the 10 screws (K) and take out the Main C.B.A. Putting it up right position on the flame can be available as shown in Fig.D9.

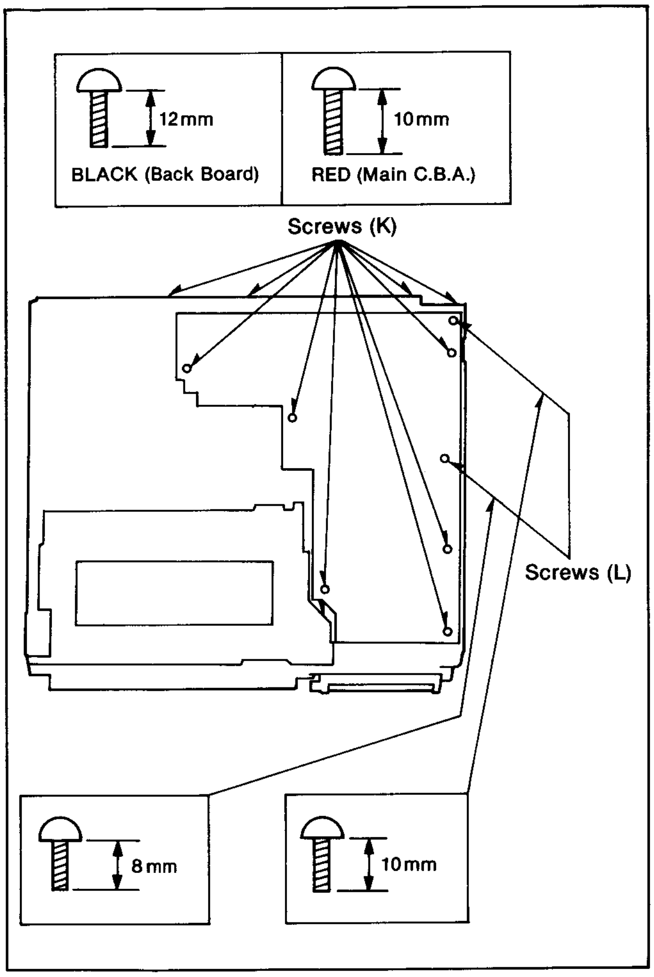

12mm
BLACK (Back Board)
10mm
RED (Main C.B.A.)
Screws (K)
Screws (L)
8mm
10mm

FIG.D8

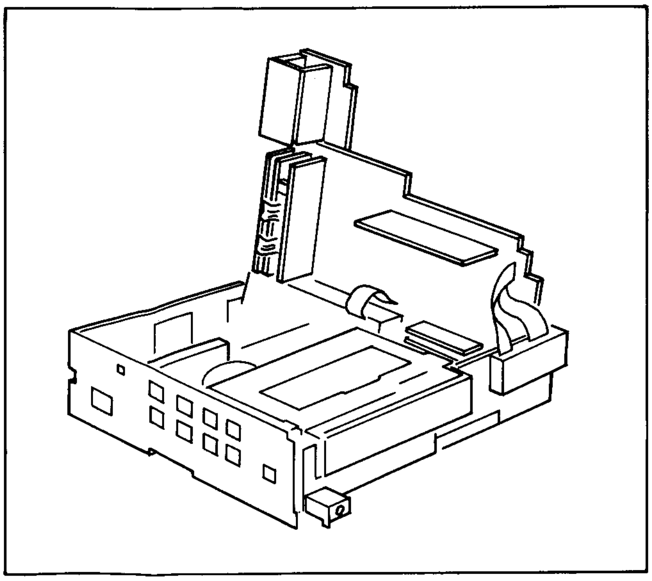


FIG.D9

8. Removal of Power Unit

Remove the 2 screws (L) and take it out from the Main C.B.A.as shown in Fig.D10.
Remove the shield case then checking can be performed.

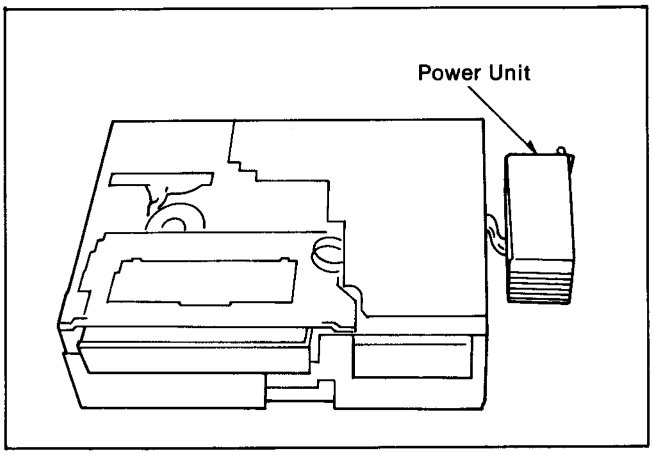


FIG.D10

9. Remove of Cassette Compartment

Remove 2 screws(M) and slide the cassette holder until appearing 2 screws(N) by turning(clockwise) the capstan rotor unit(located in the bottom side) and then remove 2 screws(N).
Remove the flexible wire from connector P1503 mounted on Take-up photo Tr. C.B.A.,then carefully pull out the cassette compartment.

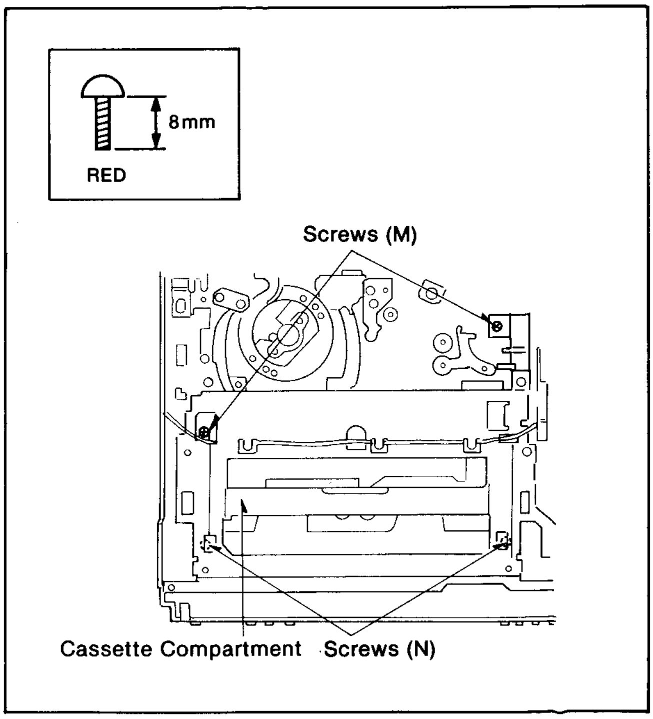

8mm
RED
Screws (M)
Cassette Compartment
Screws (N)

FIG.D11

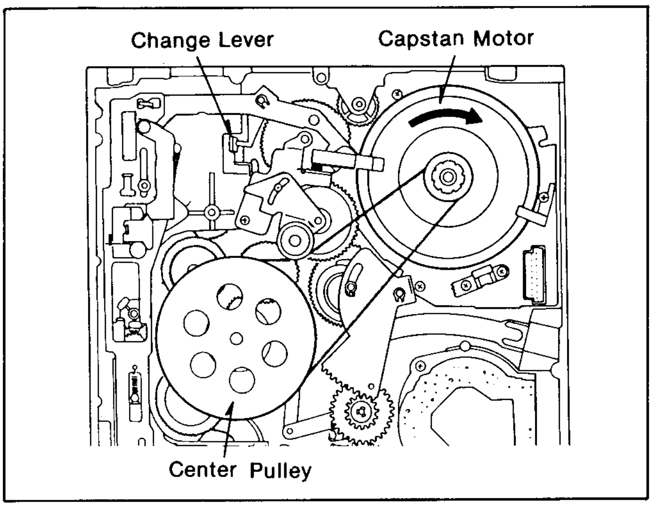

Change Lever
Capstan Motor
Center Pulley

FIG.D12

2-2-3. REINSTALLATION OF CASSETTE COMPARTMENT FROM STOP (FF/REW) POSITION

1. Set the mechanism condition to Stop (FF/REW) position by means of turning capstan motor (refer to 2-2-5.)
2. Remove the 2 screws (O) as shown in FIG.D13.

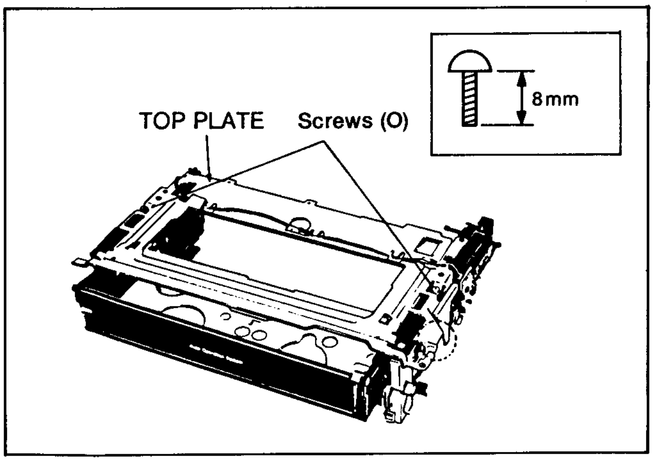

8mm
TOP PLATE
Screws (O)

FIG.D13

3. Take the top plate out.
4. Take the cassette Holder unit out as shown in FIG.D14.

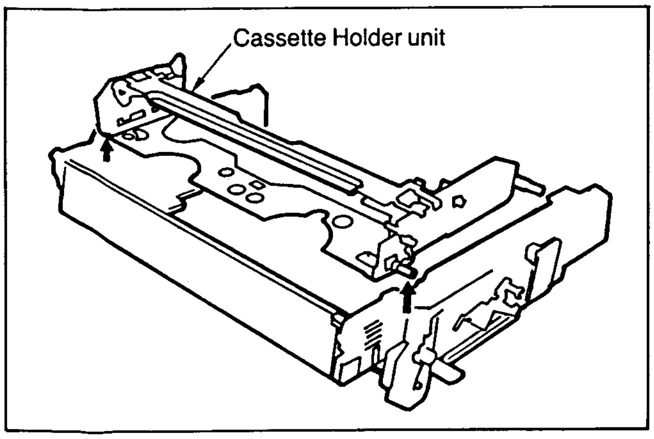

Cassette Holder unit

FIG.D14 Removal of cassette holder unit.

5. Press the sub wiper arm (P) to direction indicated by arrow so that the sub wiper arm (P) comes to cassette down position completely as shown in FIG.D15 . and keep it.

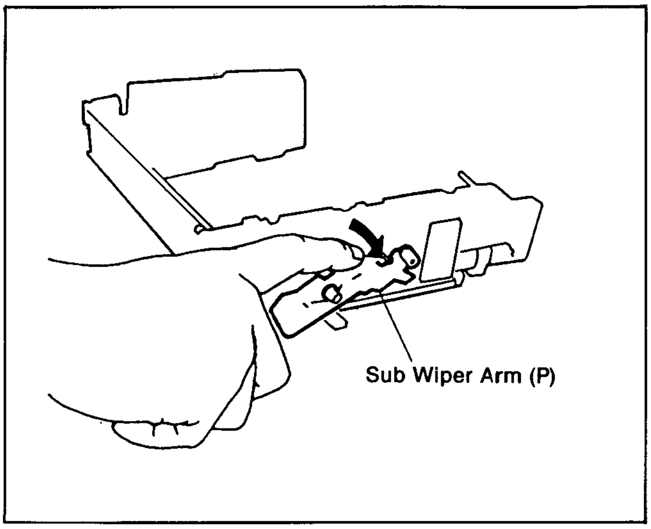

Sub Wiper Arm (P)

FIG.D15

6. Reinstall the cassette compartment (Without Cassette Holder) to chassis so that the first tip of Rack Gear A (1) comes to Marking slot of connection gear as shown in FIG.D16.

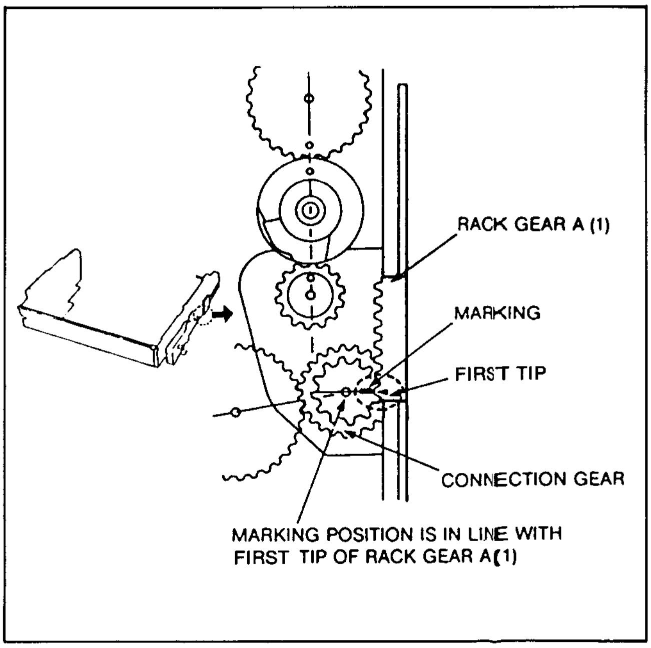

RACK GEAR A (1)
MARKING
FIRST TIP
CONNECTION GEAR
MARKING POSITION IS IN LINE WITH
FIRST TIP OF RACK GEAR A(1)

FIG.D16

7. Tighten the 4 screws (Q) as shown in FIG.D17.

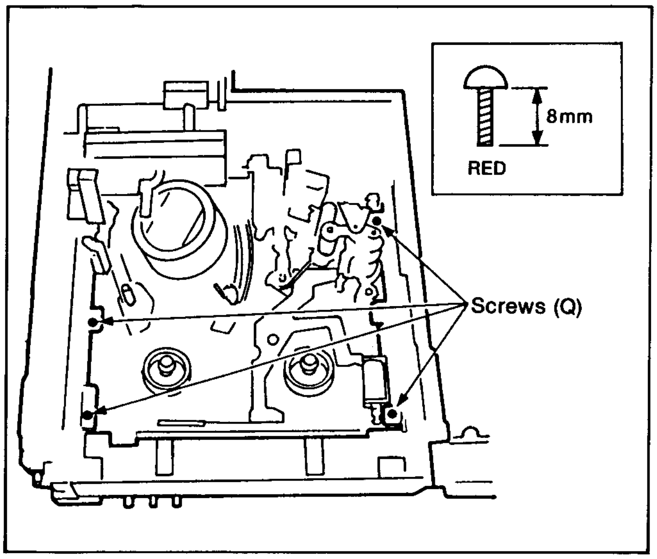

8mm
RED
Screws (Q)

FIG.D17

8. Press the change lever and turn the capstan motor counter clockwise until mechanism is placed to Eject position as shown in FIG.D18.
9. Reinstall the cassette holder unit as just the reverse way of item 4, FIG. D14.
10. Reinstall the top plate as just the reverse way of item 3, FIG.D13.

2-2-4. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

(1) Take out the Main AC.

(2) Release the Change Lever by pushing it to arrow mark direction as shown in FIG.D18.

(3) Turn the capstan motor to counter clockwise slowly until the Clutch Disk is locked. (Clutch Disk is locked once in one rotation)

(4) Release the Change Lever again when the Cluch Disk is locked.

(5) Repeat the (2) and (3) until cassette is ejected.

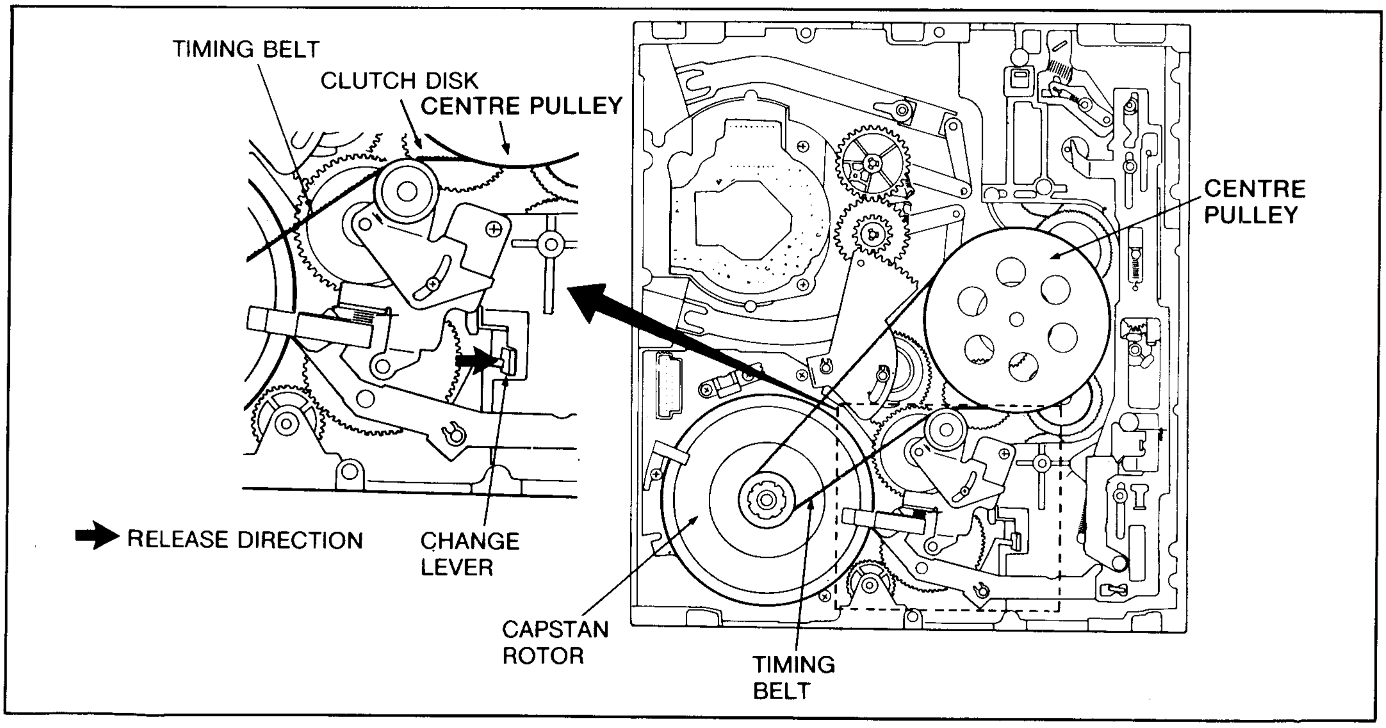

TIMING BELT
CLUTCH DISK
CENTRE PULLEY
CENTRE PULLEY
RELEASE DIRECTION
CHANGE LEVER
CAPSTAN ROTOR
TIMING BELT

FIG.D18

2-2-5. HOW TO SEE THE MOVEMENT OF MECHANISM WITHOUT CASSETTE COMPARTMENT

Since capstan motor works as loading motor and front loading motor,Phase relationship between cassette compartment and mechanism is important, so Playback and FF/REW can not be performed even just only taking out the cassette compartment, however,if you want to see the mechanical movement without cassette compartment, it is possible as follows..

1. Take out the Main AC.
2. Take out the 5 pin flexible cable from P1503 on the cassette compartment and remove the cassette compartment from chassis.
   Set the Mechanism to stop (FF/REW) mode as following items 3.,4.,5.,6.
3. Release the change lever by pussing it to arrow mark direction as shown in FIG. D18.
4. Turn the capstan motor to clockwise until the Clutch Disk is locked.
   (Clutch Disk is locked once in one rotation)
5. Release the change lever again when Clutch Disk is locked.
6. Repeat item 4 and 5 until mechanism come to stop (sub loading) position as shown in FIG.D19.
   (STOP position is same as FF/REW position, therefore, when you rotate the capstan motor in STOP position, supply or Take up reel table is rotated corresponding with direction of rotation)
7. Turn the power on.
8. Now, any operation can be performed without cassette compartment.

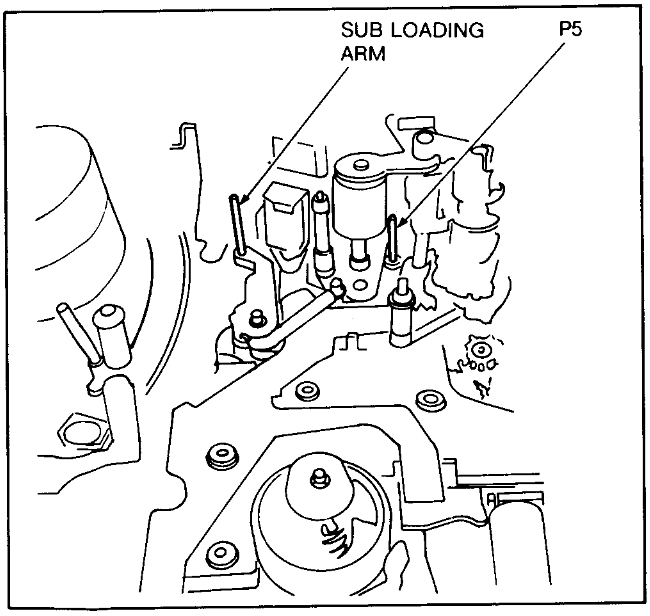


FIG.D19

Note:
1) Don't add the large torque to any gears not to break it.
2) When reinstalling the cassette compartment, refer to 2–2–3 Reinstallation of Cassette Compartment.
3) It is not possible to operate the mechanism from Eject position.

2-3. REPLACEMENT OF THE CYLINDER UNIT

2-3-1. REPLACEMENT OF THE D.D CYLINDER UNIT

Work with extreme care when removing or replacing the D.D. cylinder unit.
Do not touch the video head during servicing.

1. Remove the 2 screws (R) to take the Head Amp Pack Out.
2. Remove the 1 screw (S) to take the Earth Holder Unit Out.
3. Disconnect the 5P connector on the cylinder drive C.B.A.

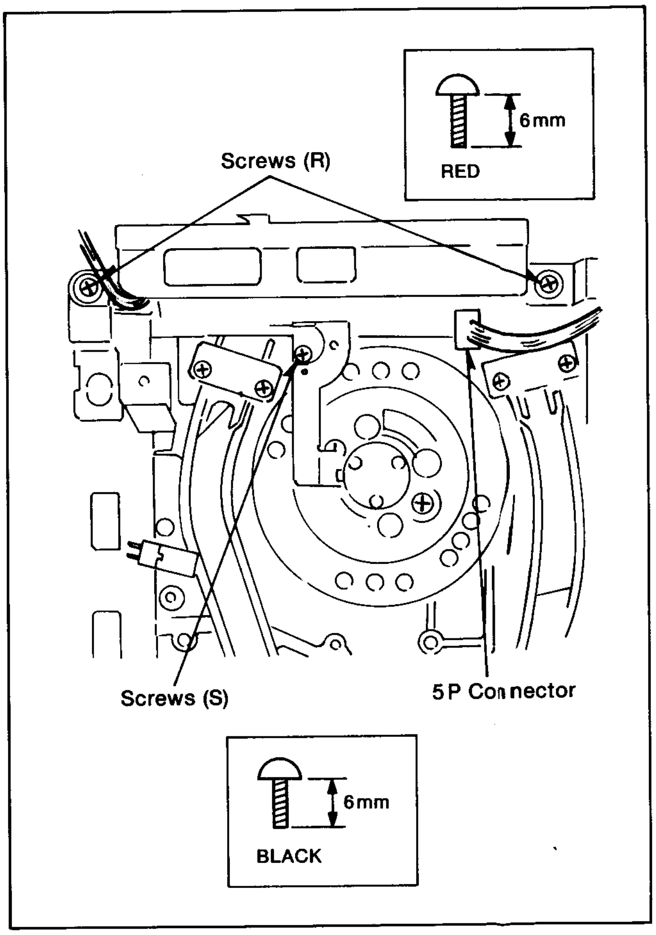


FIG.D20

4. Remove the 3 screws (T) to take the D.D. cylinder unit (with the cylinder drive C.B.A.) out.

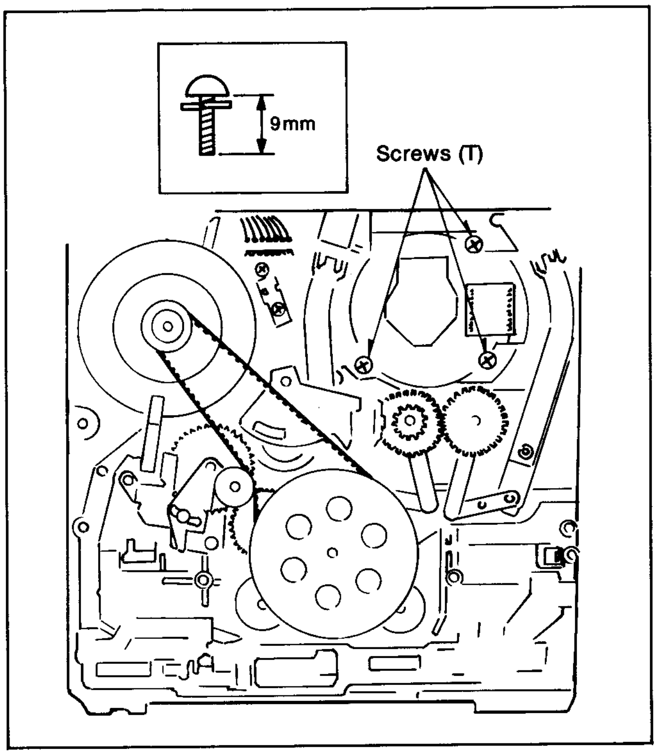


FIG.D21

Note:
Since there is very little clearance between the D.D. cylinder unit and the chassis, remove the D.D. cylinder unit gently and carefully.

5. Reinstall the new D.D.Cylinder Unit, tighten the 3 screws (T) and reinstall the Earth Holder Unit, tighten the 1 screw (S). Then re-connect the Head Amp pack and 5P connector and tighten 2 screws (R).

Note:
(1) Gently rub the video head in direction of tape travel with Head cleaning stick.
(2) After replacement, confirm the performance. If any further maintenance is required, perform "TAPE INTER-CHANGE ABILITY ADJUSTMENT".

2-3-2. REPLACEMENT OF THE CYLINDER DRIVE C.B.A.

1. Remove the D.D. cylinder unit referring the Item 2-3-1.
2. Place the D.D. cylinder unit upside down.
3. Unsolder the soldered portion (V) for shield case to take it out.
4. Unsolder the 18 soldered portions (U) indicated by an arrow wark (including 10 soldered portions inside of shield case).
5. Remove the 2 screws (W) to remove the cylinder drive C.B.A. unit.

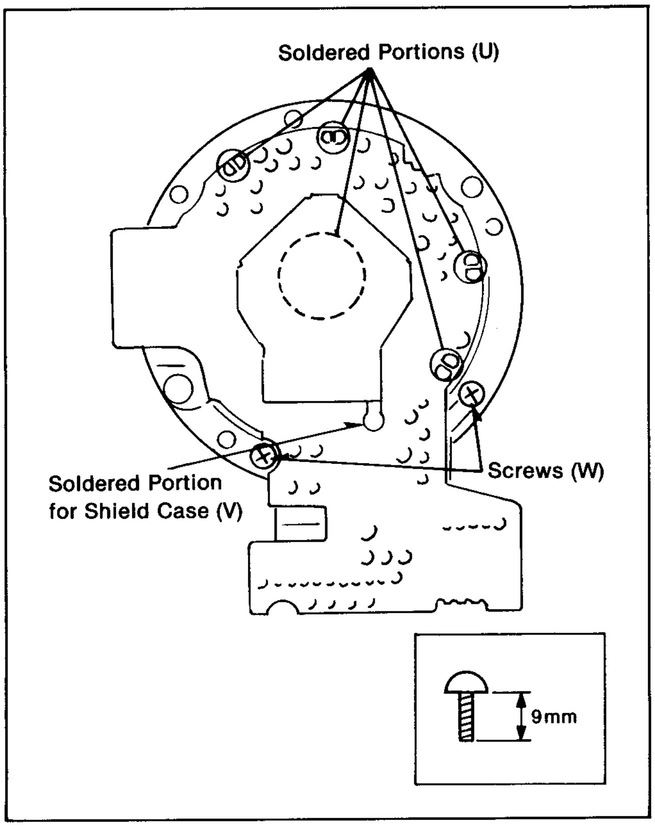


FIG.D22

6. Reinstalling is just reverse way of above procedures.

2-3-3. REPLACEMENT OF THE CYLINDER DRIVE IC

1. Remove the Cylinder Drive C.B.A. as item 2-3-2.
2. Remove the screw (X) to take the heat sink Plate out.
3. Unsolder the 18 soldered portions of the Cylinder Drive IC to take it out.
4. Reinstall the New IC with the care of Pins location.
5. Re-solder the 18 pins of the Cylinder Drive IC.
6. Reinstall the Cylinder Drive C.B.A. to the D.D.

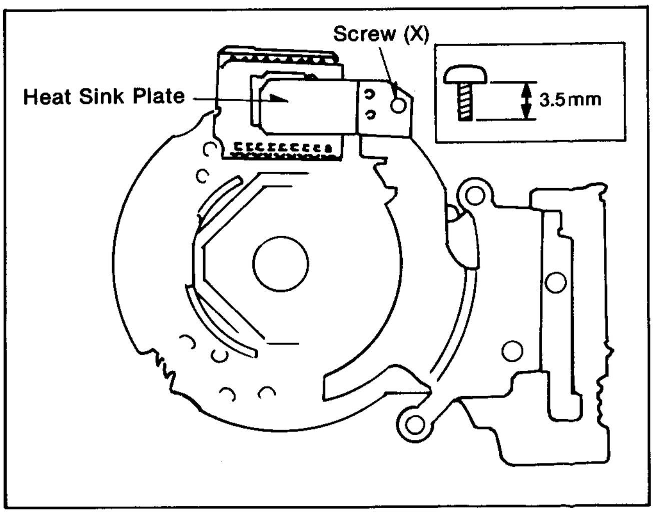


FIG.D23

2-3-4. REPLACEMENT OF THE UPPER CYLINDER UNIT

1. Remove two screws as shown below.
2. Unsolder 12 soldered portions indicated by arrows on the C. Board.
3. Remove the Upper Cylinder Unit by lifting it upward.

Note:
Soldered portion can be easily removed by using solder sucking wire, etc.

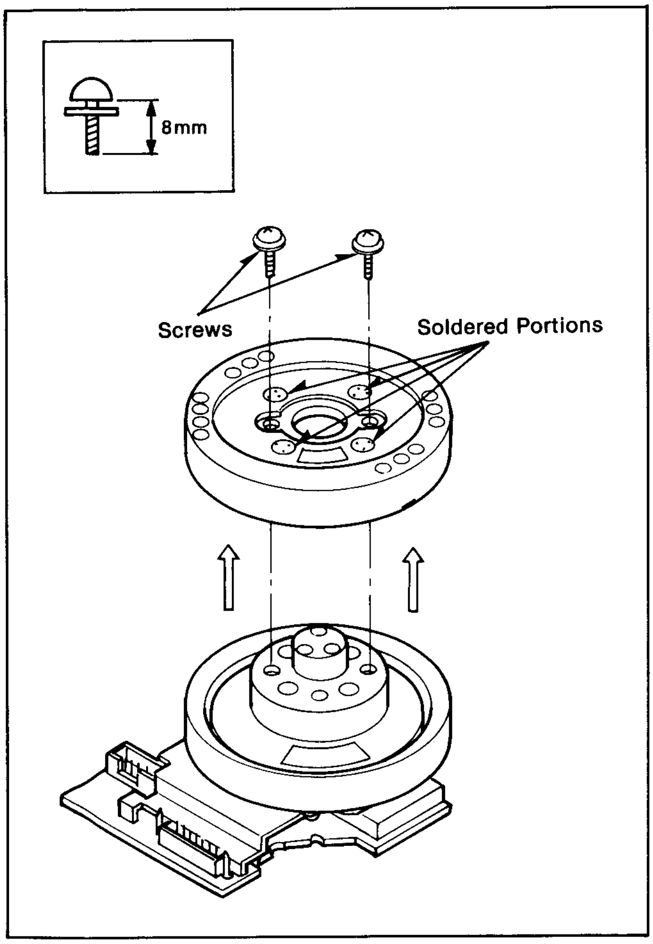

8mm
Screws
Soldered Portions

FIG.D24

4. The upper cylinder unit can be reinstalled by reversing the removal procedure, however, when the upper cylinder is reinstalling, be extremely carefull so that white portion of C. Board of the upper cylinder correctly matches the white portion of the bottom cylinder as shown below.

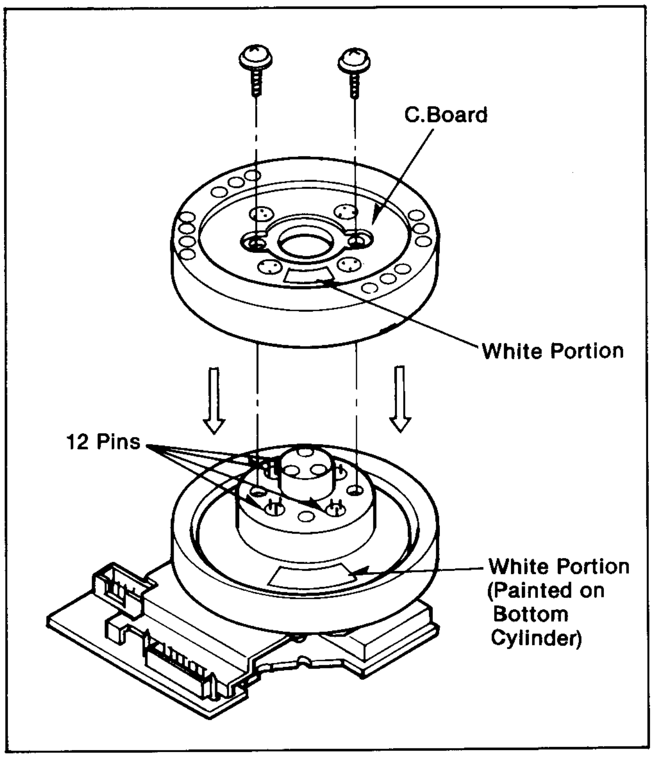

C.Board
White Portion
12 Pins
White Portion (Painted on Bottom Cylinder)

FIG.D25

Note:
1). If the Upper Cylinder Unit is reversely installed, no colour would appear when playing back a pre-recorded tape.
2). Do not loosen the 3 small screws on the top of the cylinder as shown below .
If these 3 screws are loosend, Cylinder motor is broken and not restored.

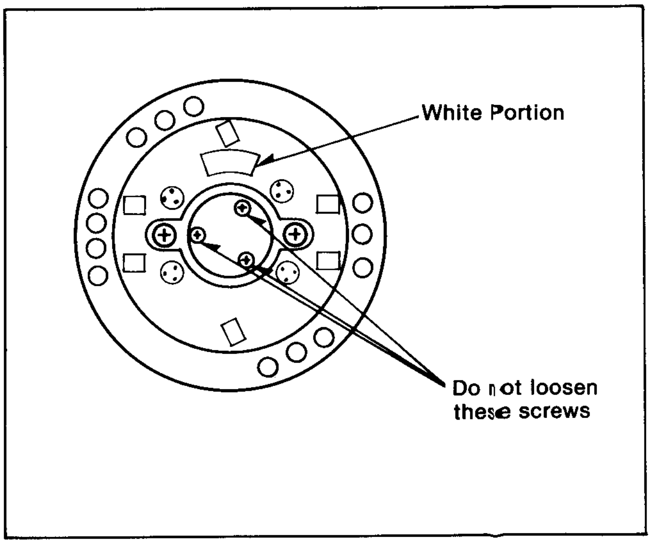

White Portion
Do not loosen these screws

FIG.D26

2-4. ELECTRICAL ADJUSTMENT PROCEDURES

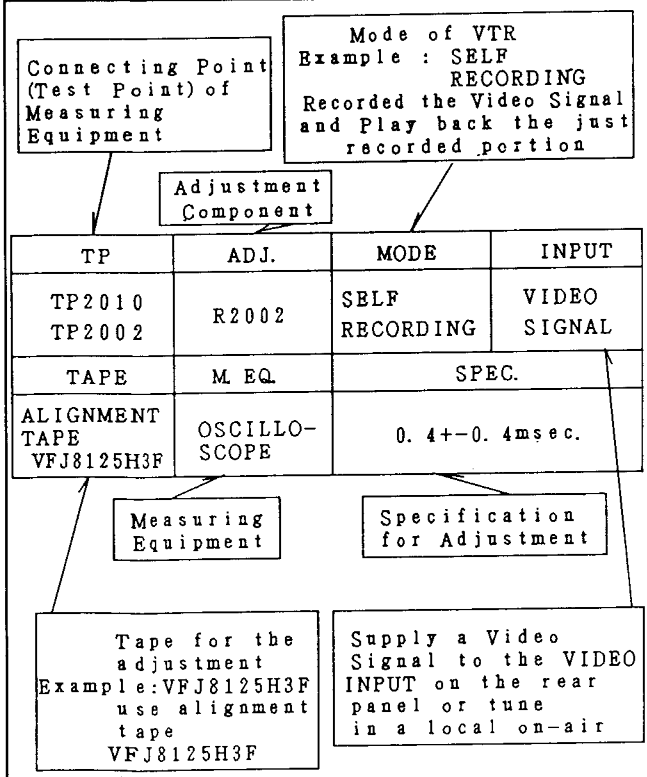
This section provides complete electrical adjustment procedures which may be required for electronic circuits of VHS Video Cassette Recorders NV–H75EG.

2-4-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
   Voltage Range: 0.001~50V
2. Dual–Trace Oscilloscope
   Voltage range: 0.005~50V/div.
   Frequency Range: DC–30MHz
   Probes: 10:1
3. Frequency counter
   Frequency Range: 0~10MHz
4. Signal Generator (Sinewave)
   Frequency Range: 0~500KHz
5. Video Sweep Generator
   Frequency Range: 0~10MHz
6. Colour Monitor TV
7. Plaastic Tip Driver
8. VHS Alignment Tape (VFJ8125H3F)
9. Pattern Generator

2-4-2. HOW TO READ THE ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example : SELF RECORDING Recorded the Video Signal and Play back the just recorded portion
Adjustment Component
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example:VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on–air

TP	ADJ.	MODE	INPUT
TP2010 TP2002	R2002	SELF RECORDING	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	0. 4+–0. 4msec.	

Note: If ☒ appears in any block, this means it is not used or not important.

FIG.E1

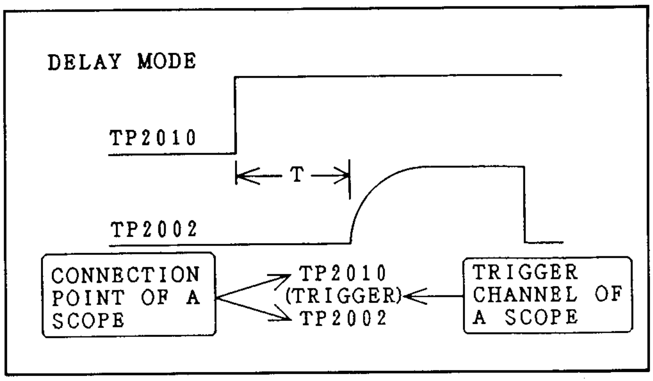

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010
(TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

FIG.E2

Note:
Before the electrical adjustment, set the VHS VTR as following conditions except for especial instructions in each adjustment item.

1) Tracking Control VR --- Centre FIX Position
2) Picture Sharpness VR -- Centre FIX Position
3) RF Signal Level SW ---- HIGH
4) TEST ON / OFF ---- OFF
5) Input Selector SW ---- LINE
6) Timer Record Button --- OFF
7) EDIT SW --- OFF
8) DBS SW ------ OFF
9) Audio Rec Level VRs --- Centre Fix Position
10) Oscilloscope–Probe --- 10:1 Probe

SERVO SECTION

2-4-3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAY	☒
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	6.5±0.5H	

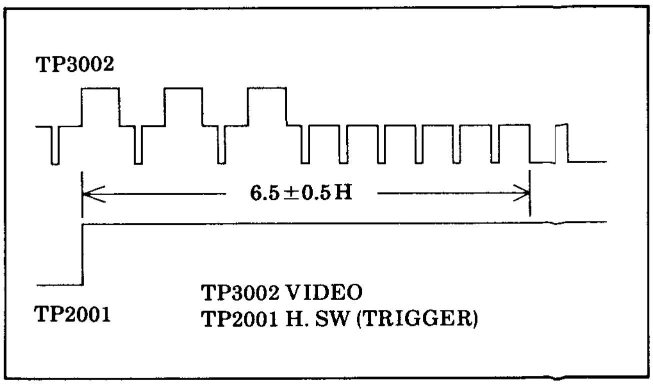

TP3002
6.5±0.5H
TP2001
TP3002 VIDEO
TP2001 H. SW (TRIGGER)

FIG.E3

2-4-4. TRACKING FIX ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP2002	VR2002	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	T=1.6±0.4msec.	

1. Record video signal.
2. Playback the just recorded portion.
3. Adjust VR2002 so that the period of "T" becomes 1.6 +− 0.4msec as shown below.

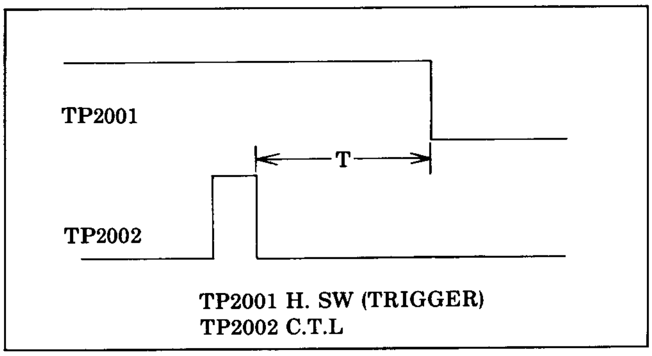


FIG.E4

2-4-5. SLOW FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2015	VR2013	STILL	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE (60min type)	FREQUENCY COUNTER	453±15Hz	

1. Record video signal and play back the just recorded portion.
   Then place the unit in STILL mode.
2. Connect the jumper wire between TP2025 and GND.
3. Connect the jumper wire between TP2026 and GND.
4. Connect the frequency counter to TP2015.
5. Adjust the VR2013 so that the reading of the Frequency Counter is 453 +− 15Hz.

2-4-6. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2020 TP2001	VR2011	SLOW	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	T=20.0±2.0msec.	

1. SLOW TRACKING VR is in centre fix position.
2. Play back the just recorded portion in SLOW mode.
3. Adjust VR2011 for 20+−20msec.

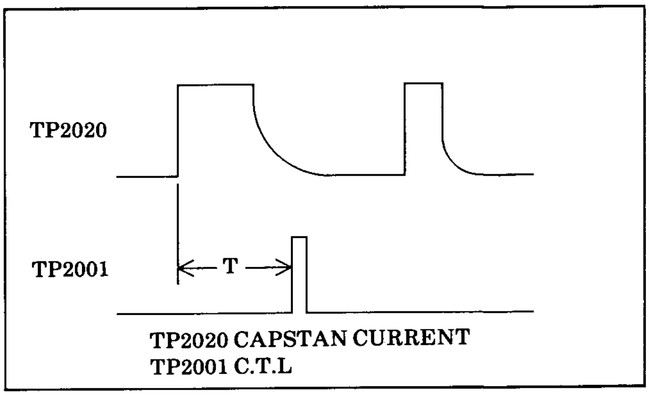


FIG.E5

2-4-7. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TV MONITOR	VR2010	STILL	VIDEO SIGNAL (MONO SCOPE)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	TV MONITOR	NO V-DANCING	

1. Play back the just recorded portion and Place the unit in STILL mode.
2. Adjust VR2010 on the Servo pack so that the V−dancing does not appear on the TV Monitor as shown below.
3. Confirm that the V−dancing does not appear in cue and Review modes. If the V−dancing is appeared on the TV Monitor, this adjustment should be repeated again.

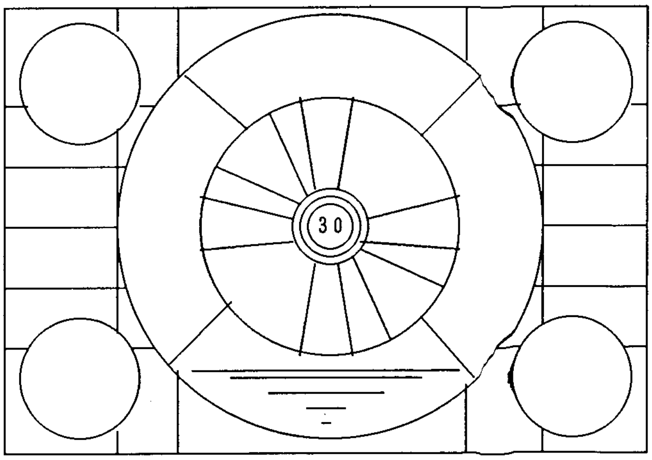


FIG.E6

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-4-8. CHROMINANCE & LUMINANCE RECORDING CURRENT ADJUSTMENT

* CHROMINANCE RECORDING CURRENT ADJ.

TP	ADJ.	MODE	INPUT
TP503 (HOT) TP504 (GND)	VR502	RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	24±3mVp-p	

1. Connect the oscilloscope to TP503 (HOT) and TP504 (GND).
2. Connect a jumper wire between luminance & chrominance pack–(6) and GND.
3. Adjust VR502 for 24+–3mVp–p as shown below.

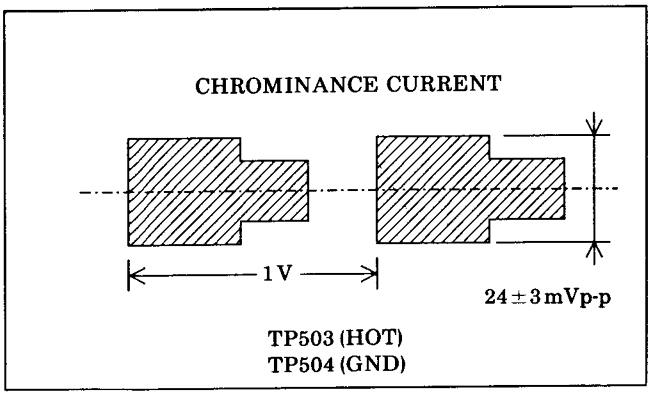

CHROMINANCE CURRENT
1V
24±3mVp-p
TP503 (HOT)
TP504 (GND)

FIG.E7

* LUMINANCE RECORDING CURRENT ADJ.

TP	ADJ.	MODE	INPUT
TP503 (HOT) TP504 (GND)	VR501	RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	105±5mVp-p	

4. Remove a jumper wire from connected points.
5. After chrominance recording current adjustment, adjust VR501 for 105+–5mVp–p as shown below.

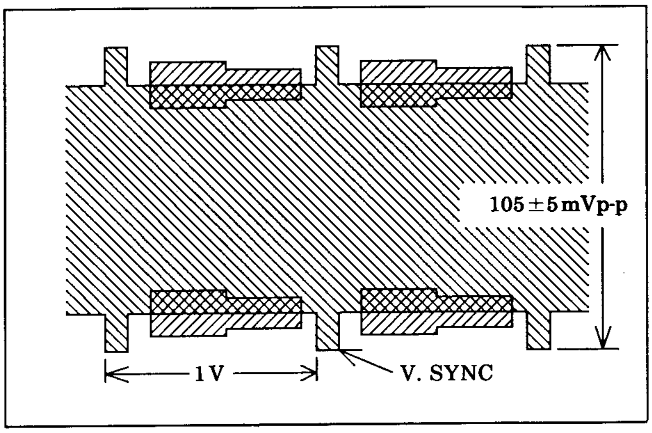

105±5mVp-p
1V
V. SYNC

FIG.E8

2-4-9. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR3012	SELF RECORDING	VIDEO SWEEP
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	A=0±1dB	

1. Set the sweep generator output as shown below.

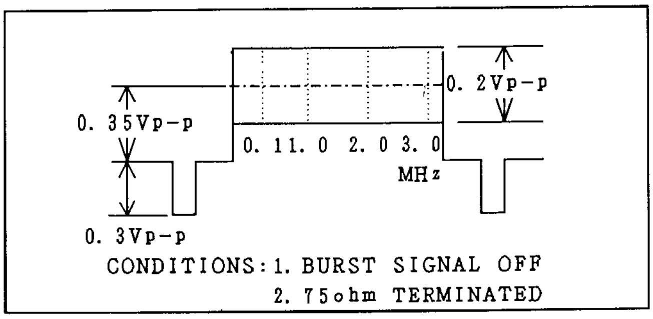

0. 35Vp–p
0. 2Vp–p
0. 1
1. 0
2. 0
3. 0
MHz
0. 3Vp–p
CONDITIONS: 1. BURST SIGNAL OFF
2. 75ohm TERMINATED

FIG.E9

2. Play back the just recorded portion.
3. Adjust VR3012 so that the level at 2MHz (A) becomes within specification comparing with the level at 0.1MHz as shown below.

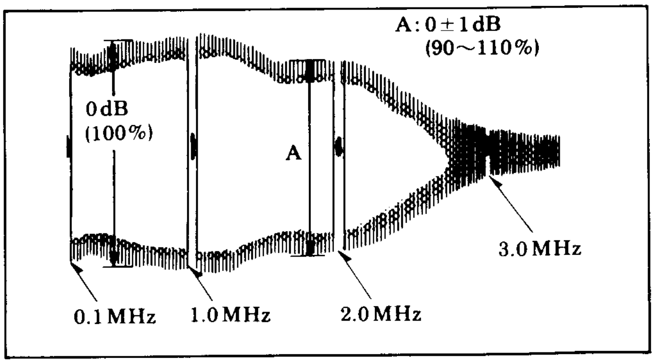

A: 0±1dB
(90~110%)
0dB
(100%)
A
3.0MHz
0.1MHz
1.0MHz
2.0MHz

FIG.E10

2-4-10. LUMINANCE CCD GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR302	STOP	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WAVEFORM IS MINIMIZED	

1. Connect the oscilloscope to TP3002.
2. Adjust VR302 so that the waveform is minimized as shown below.

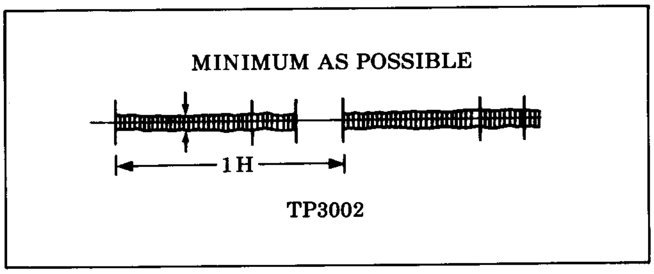

MINIMUM AS POSSIBLE
1H
TP3002

FIG.E11

2-4-11. PLAYBACK CHROMA CYAN LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR803	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	0.55±0.1Vp-p	

1. Play back the just recorded portion.
2. Adjust VR803 for 0.55+– 0.1Vp–p as shown below.

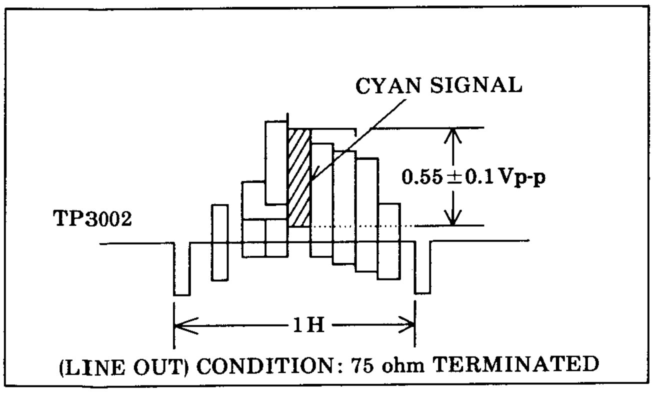

CYAN SIGNAL
0.55±0.1Vp-p
TP3002
1H
(LINE OUT) CONDITION: 75 ohm TERMINATED

FIG.E12

2-4-12. SECAM KILLER ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC851-11	T851	SELF RECORDING	SECAM VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MINIMUM AS POSSIBLE	

Note:
To make this adjustment, please set the SECAM Pack as shown below.

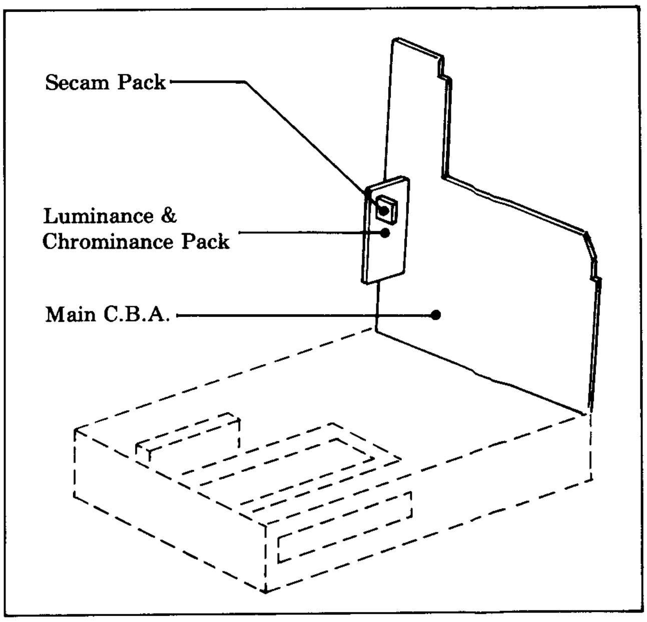

Secam Pack
Luminance & Chrominance Pack
Main C.B.A.

FIG.E13

1. First, remove the SECAM Pack from the Luminance & Chrominance Pack.
   Next, reinstall the SECAM Pack to Luminance & Chrominance Pack on foil side.
   Finally solder the soldering portions of the SECAM Pack.

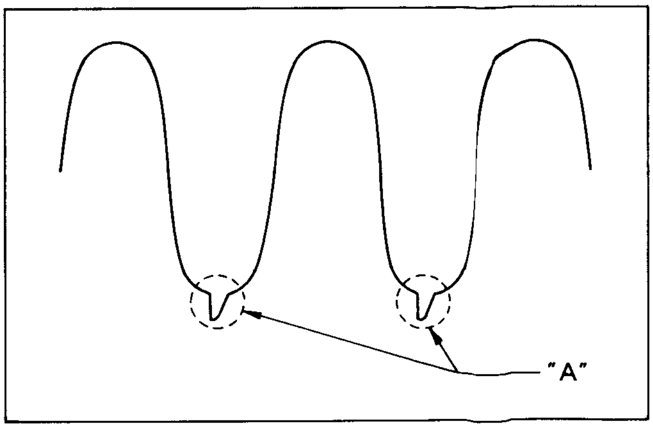


FIG.E14

2. Adjust T851 so that the points "A" becomes maximum on the waveform.

NORMAL AUDIO SECTION

2-4-13. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.2±0.1 mVrms	

2-4-14. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP4001)	VR4001	SELF RECORDING	1 kHz, −10 dB AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ V.T.V.M.	E-E LEVEL= −8±2dB PLAYBACK LEVEL= E-E LEVEL±0.5dB	

1. Set the Audio Mode Selector to NORMAL position. (Both the Left and Right Indicators are not lit.
2. Playback the just recorded portion.
3. Adjust VR4001 so that the level of the playback waveform becomes E–E level +– 0.5dB.

Note:
1. Befor this adjustment, "Tape Interchangeability Adjustment" and "Audio Bias Current Adjustment" must be completed.
2. Video signal must be connected to video input.

2-4-15. AUDIO E-E LEVEL ADJUSTEMNT

TP	ADJ.	MODE	INPUT
LINE OUT (L)	VR4512	STOP	1 kHz, −10 dB AUDIO SIGNAL
TAPE	**M.EQ.**	**SPEC.**	
	SIGNAL GENERATOR/ V.T.V.M.	−8 dB±0.5 dB	

1. Set the Audio Mode Select to STEREO position.(Both the Left and Right indicators are lit.)
2. Adjust VR4512 to –8 +– 0.5dB at the line output(l).

Hi-Fi ADUIO SECTION

2-4-16. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR4004 (L) VR4005 (R)	STOP	1 kHz, −10 dB
TAPE	**M. EQ.**	**SPEC.**	
	SIGNAL GENERATOR		

1. Set the Audio Playback Mode Selector to STEREO position. (Both the Left and Right Indicators are lit.)
2. Set the output of the Signal Generator to 1KHz and –10dB, and supply it to both Input Jacks (L) and (R).
   Next, Adjust the Audio Rec Level VRs so that the audio outputs are 400mVp–p at both Output Jacks (L) and (R).
3. Adjust VR4004 so that the 0dB indicator just lights up on the L–ch level meter as shown below.
4. Adjust VR4005 so that the 0dB indicator just lights up on the R–ch level meter as shown below.

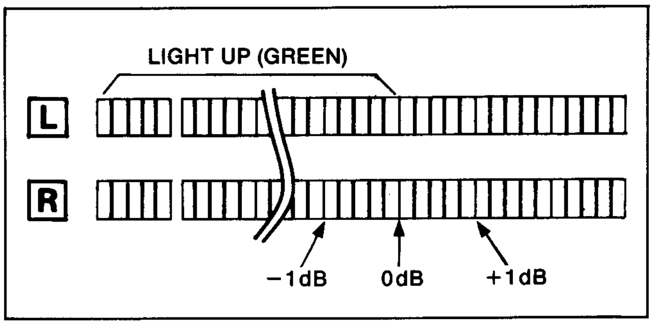


FIG.E15

2-4-17. Hi-Fi AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4507 (HOT) SHIELD CASE (GND)	VR4503	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	240±10 mVp-p	

1. Set the Audio Playback Mode Selector to "STEREO" position. (Both the Left and Right Indicators are lit.)
2. Connect the OSCILLOSCOPE to TP4507(HOT) and SHIELD CASE(GND).
3. Adjust VR4503 so that the Audio recording current become 240+–10mVp–p as shown below.

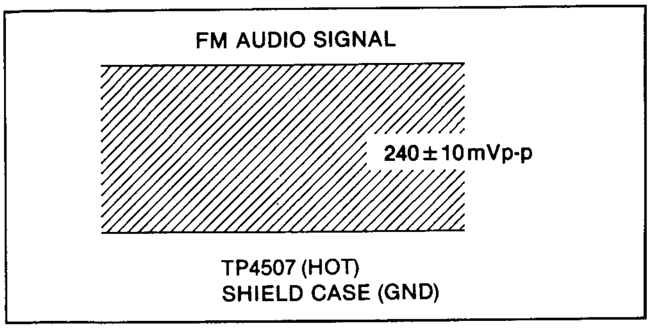


FIG.E16

2-4-18. AUDIO HEAD SWITCHING SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4511 TP2001	VR4510	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	$T=T2-\left(\frac{T2-T1}{2}\right)$ msec.	

1. Play back the alignment tape (VFJ8125H3F).
2. Connect the oscilloscope to TP4511 and TP2001.
3. Play back the just recorded portion.
4. Adjust VR4510 while listening to the stereo playback sound.
   (1) Confirm the "T2" time when the abnormal sound just occurs during turning clockwise on VR4510.
   (2) Confirm the "T1" time when the abnormal sound just occurs during turnig counter clockwise on VR4510.
   (3) Adjust VR4510 so that the falling edge "T" of Audio H.SW pulse becomes the center portion of the both "T2" and "T1".

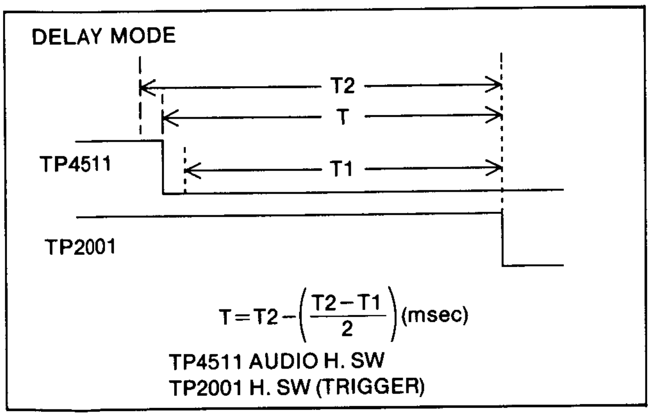


FIG.E17

2-4-19. AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR4505	SELF RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE			

Note:
Before this adjustment "Tape Interchangeability Adjustment" must be completed.

1. Set Audio Playback Mode Selector to STEREO position. (Both the Left and Right Indicators are lit.)
2. Set the Audio Level Meter Selector to Tracking mode.
3. Set the Tracking VR so that the Audio Tracking level becomes maximum.
4. Preadjust VR4505 until the Hi-Fi indicator on the front panel display turns the NORMAL indication.
5. Then slowly adjust VR4505 where the STEREO indication just lights up.
6. Confirm that the abnormal sound does not contain in the playback Hi-Fi sound.

2-4-20. Hi-Fi AUDIO CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4502-32 (L) IC4802-8 (R)	VR4501 (L) VR4509 (R)	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	1400±10kHz (L) 1800±10kHz (R)	

2-4-21. AUDIO DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4502-38 (L) IC4502-1 (R)	VR4502 (L) VR4507 (R)	RECORDING	1 kHz, −10dB (316mVp-p) AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ D.V.M.	260mV p-p	

1. Set the Audio Playback Mode Selector to MANUAL position. (Both the left and Right Indicators are not lit.)
2. Set the output of the Signal generator to 1KHz and −10dB, and supply it to both input Jacks (L) and (R).
   Next, adjust the Audio Rec Level VRs so that the audio outputs are 400mVp-p at both Output Jacks (L) and (R).

3. Adjust VR4502 to 260mVp-p at IC4502-38 on Hi-Fi AUDIO C.B.A. for L-Channel.
4. Adjust VR4507 to 260mVp-p at IC4502-1 on Hi-Fi AUDIO C.B.A. for R-Channel.

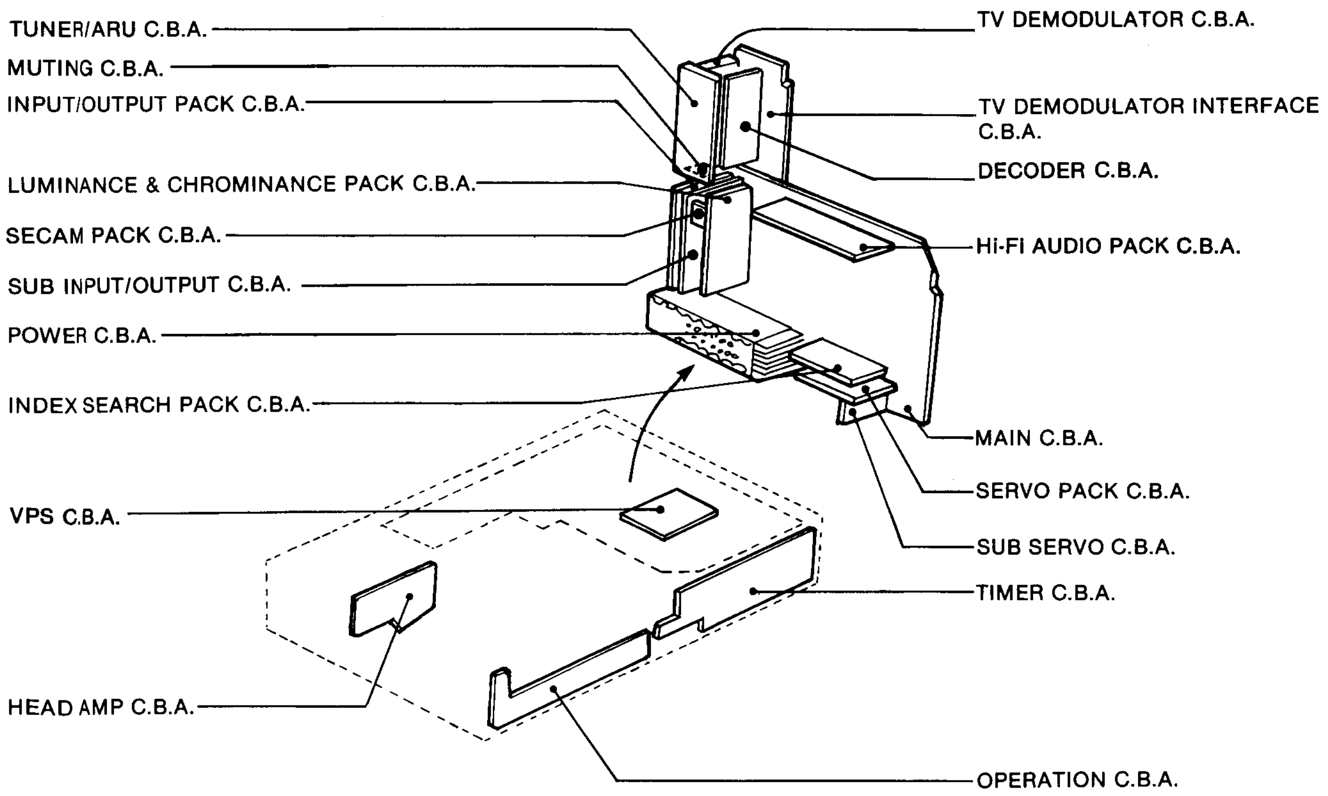
2-4-22. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP3002)	VR4504 (L) VR4508 (R)	SELF RECORDING	SIGNAL GENERATOR (1kHz, −10dB)/ VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ V.T.V.M	E-E LEVEL=−8±2dB PLAYBACK LEVEL= E-E LEVEL ±0.5dB	

Note:
Before this adjustment, Tape Interchangeability Adjustment" must be completed.

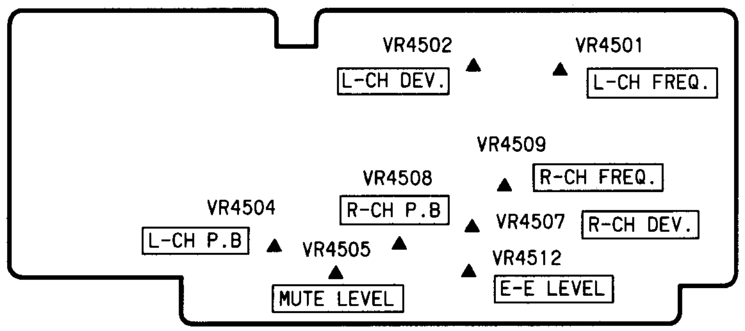
1. Play back the just recorded portion.
2. Adjust VR4504 and VR4508 volumes one by one, so that the level of the playback becomes E-E level+-0.5dB.

CIRCUIT BOARD LAYOUT

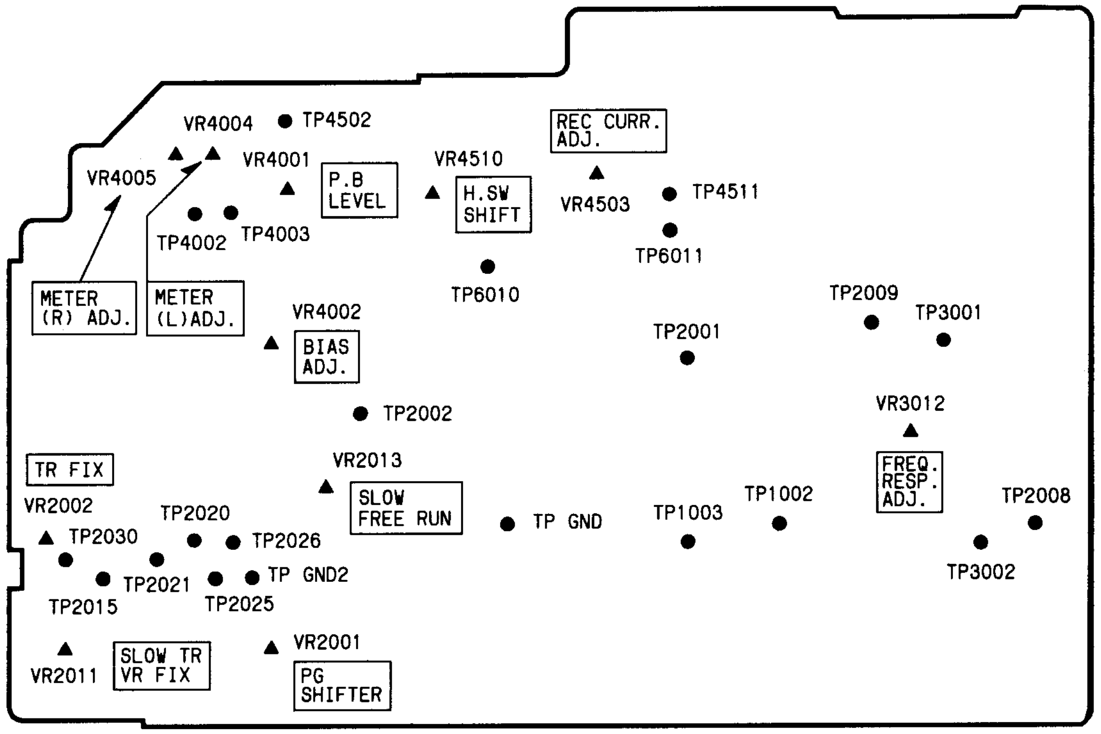

TUNER/ARU C.B.A.
MUTING C.B.A.
INPUT/OUTPUT PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
SECAM PACK C.B.A.
SUB INPUT/OUTPUT C.B.A.
POWER C.B.A.
INDEX SEARCH PACK C.B.A.
VPS C.B.A.
HEAD AMP C.B.A.
TV DEMODULATOR C.B.A.
TV DEMODULATOR INTERFACE C.B.A.
DECODER C.B.A.
Hi-FI AUDIO PACK C.B.A.
MAIN C.B.A.
SERVO PACK C.B.A.
SUB SERVO C.B.A.
TIMER C.B.A.
OPERATION C.B.A.

LOCATION OF TEST POINTS & CONTROLS —1—

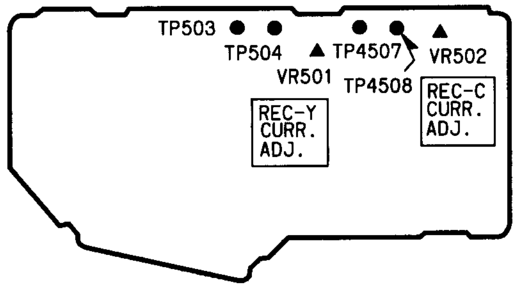
Hi-Fi AUDIO PACK C.B.A.


VR4502
L-CH DEV.
VR4501
L-CH FREQ.
VR4509
R-CH FREQ.
VR4508
R-CH P.B
VR4504
L-CH P.B
VR4505
VR4507
R-CH DEV.
VR4512
E-E LEVEL
MUTE LEVEL

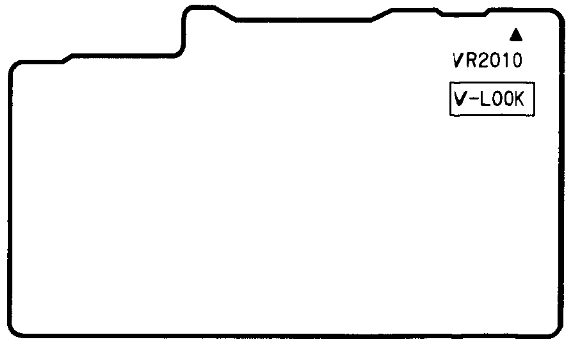
MAIN C.B.A.


VR4004
TP4502
VR4001
VR4005
P.B LEVEL
VR4510
H.SW SHIFT
REC CURR. ADJ.
VR4503
TP4511
TP6011
TP4002
TP4003
METER (R) ADJ.
METER (L)ADJ.
VR4002
BIAS ADJ.
TP6010
TP2001
TP2009
TP3001
TP2002
VR3012
FREQ. RESP. ADJ.
TR FIX
VR2002
VR2013
SLOW FREE RUN
TP GND
TP1003
TP1002
TP2008
TP2020
TP2030
TP2026
TP2021
TP GND2
TP2015
TP2025
TP3002
VR2011
SLOW TR VR FIX
VR2001
PG SHIFTER

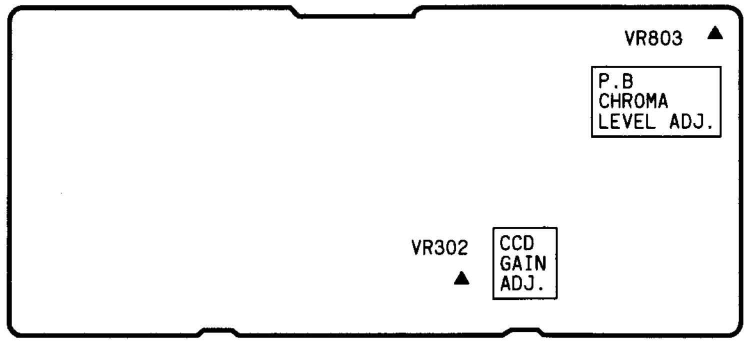
HEAD AMP C.B.A.


TP503
TP504
TP4507
VR502
VR501
TP4508
REC-Y CURR. ADJ.
REC-C CURR. ADJ.

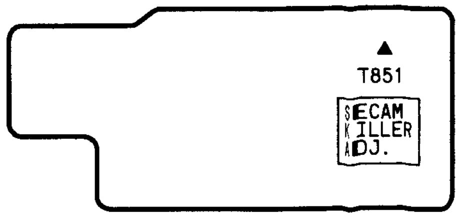
SERVO PACK C.B.A.


VR2010
V-LOOK

LUMINANCE & CHROMINANCE PACK C.B.A.

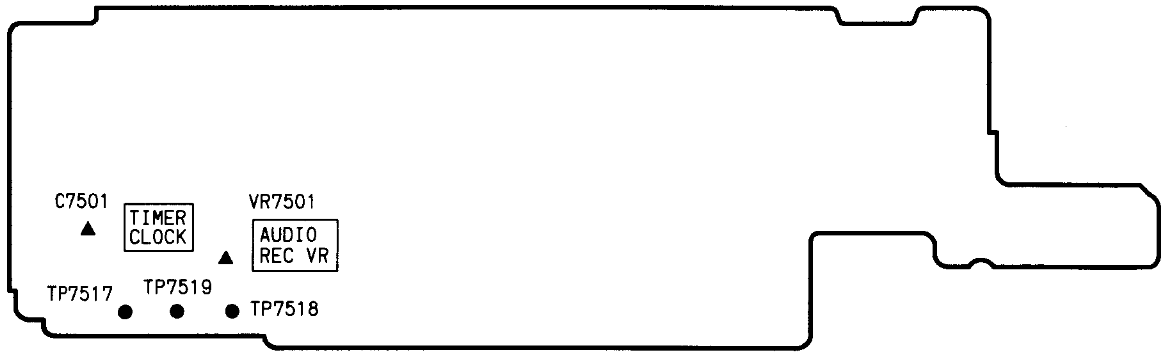

VR803
P.B CHROMA LEVEL ADJ.
VR302
CCD GAIN ADJ.

SECAM PACK C.B.A.

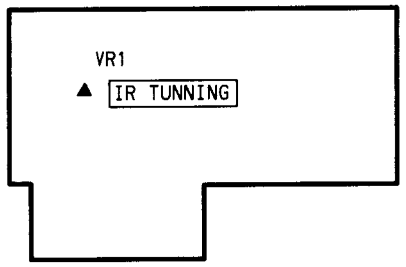

T851
SECAM KILLER ADJ.

LOCATION OF TEST POINTS & CONTROLS —2—

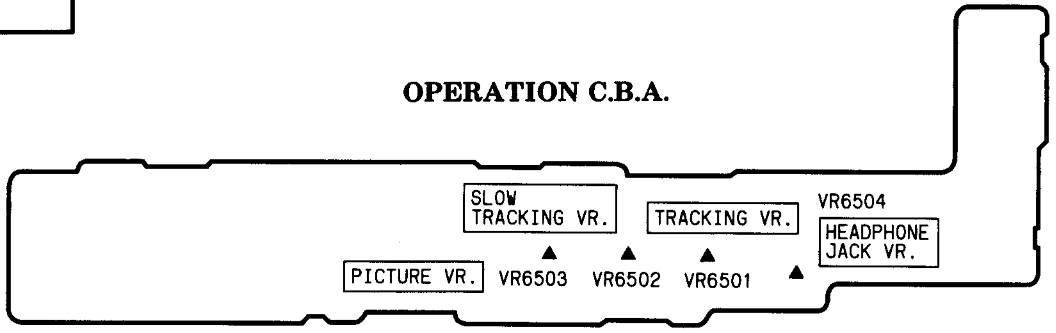
TIMER C.B.A.


C7501
TIMER CLOCK
VR7501
AUDIO REC VR
TP7517
TP7519
TP7518

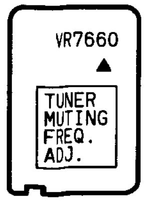
IR RECEIVER C.B.A.


VR1
IR TUNNING

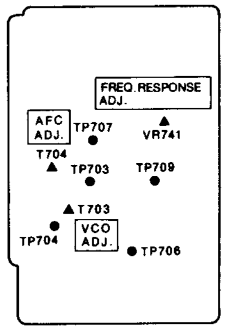
OPERATION C.B.A.


SLOW TRACKING VR.
TRACKING VR.
VR6504
HEADPHONE JACK VR.
PICTURE VR.
VR6503
VR6502
VR6501

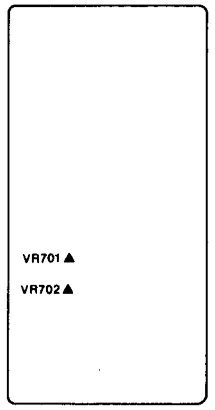
MUTING C.B.A.


VR7660
TUNER MUTING FREQ. ADJ.

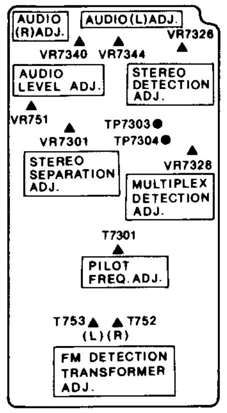
TV DEMODULATOR C.B.A.


FREQ.RESPONSE ADJ.
AFC ADJ.
TP707
VR741
T704
TP703
TP709
T703
TP704
VCO ADJ.
TP706

TUNER/ARU C.B.A.


VR701
VR702

DECODER C.B.A.


AUDIO (R)ADJ.
AUDIO(L)ADJ.
VR7326
VR7340
VR7344
AUDIO LEVEL ADJ.
STEREO DETECTION ADJ.
VR751
TP7303
VR7301
TP7304
STEREO SEPARATION ADJ.
VR7328
MULTIPLEX DETECTION ADJ.
T7301
PILOT FREQ. ADJ.
T753
T752
(L)(R)
FM DETECTION TRANSFORMER ADJ.

TIMER SECTION

2-4-23. TIMER CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC7501-37	C7501		
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	3906.25±0.008μs	

Note:
1) Do not connect the AC power plug.
2) Make a short circuit at C7571 to discharge. (refer to the Technical Information)

1. Set the voltage of the DC power supply for 5.8V+-0.1V and supply it to P7501-3 (+) and GND (-).
2. Connect a jumper wire between P7501-5 and GND.
3. Connect the frequency counter to IC7501-37.
4. Adjust C7501 for 3906.25us+-0.008us.

2-4-24. TIMER MUTING FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC7651-(4)	VR7660		
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	15.625±0.05kHz	

Note:
1) To make this adjustment, please prepare the following circuit as shown below.
2) Make a short circuit between TP709 and GND.

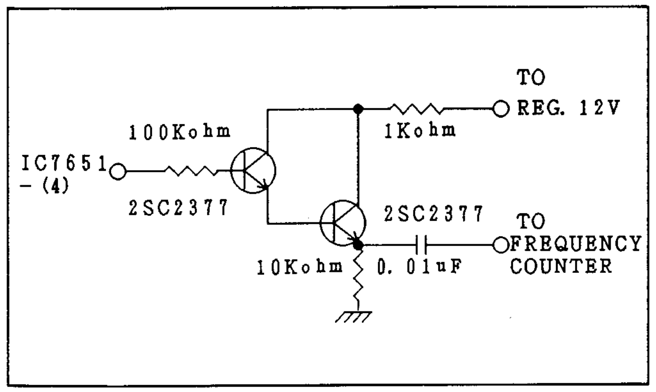

IC7651
- (4)
100Kohm
2SC2377
1Kohm
TO
REG. 12V
2SC2377
10Kohm
0.01uF
TO
FREQUENCY
COUNTER

FIG.E18

TV DEMODULATOR SECTION

2-4-25. TEST EQUIPMENTS

To make adjustment completely, following equipments are required.

1. VIF SWEEP GENERATOR with the Trap Adjustor 38.9MHz
2. SIF SWEEP GENERATOR ....5.5MHz +- 150KHz
3. CW OSCILLATOR ....38.9MHz +- 100KHz
4. MONITOR SCOPE
5. OSCILLOSCOPE
6. DIGITAL VOLT METER
7. TUNING AMPLIFIER
8. MULTI VOICE MODULATOR (M.V.M)

Note:
To make this adjustment, set the Demodulator Unit as shown below.

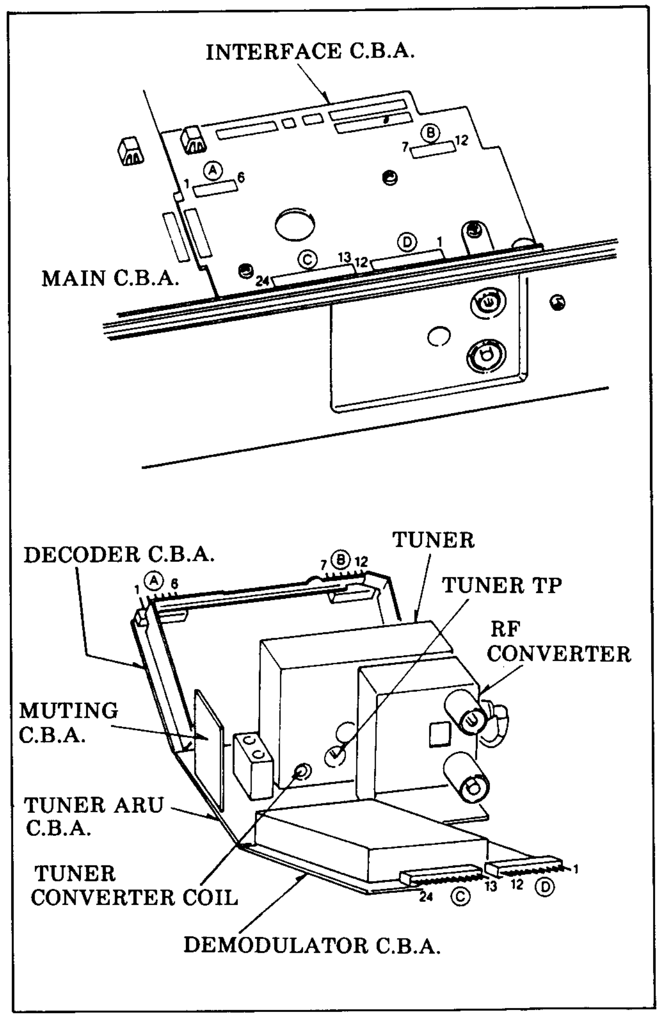
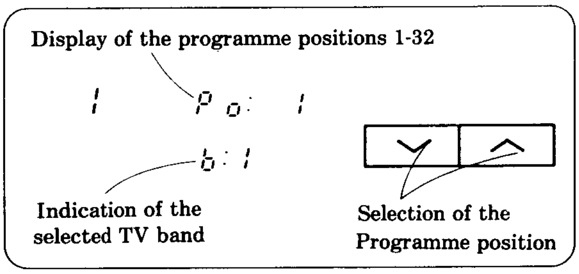

INTERFACE C.B.A.
MAIN C.B.A.
Ⓐ
Ⓑ
Ⓒ
Ⓓ
1
6
7
12
13
24
DECODER C.B.A.
TUNER
TUNER TP
RF CONVERTER
MUTING C.B.A.
TUNER ARU C.B.A.
TUNER CONVERTER COIL
DEMODULATOR C.B.A.

FIG.E19

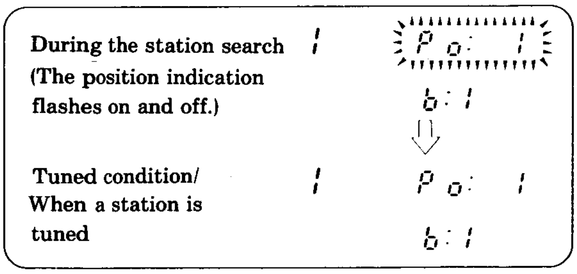
First, remove the Demodulator Unit (Tuner, RF Converter ,Muting C.B.A,TV Demodulator C.B.A,Tuner ARU C.B.A and Decoder C.B.A from Interface C.B.A. Then, connect the Demodulator pack pin and Decoder Pack pin to solder the same portions of the Interface C.B.A. by lead jumper.

Note: AFC ON–OFF
When you make AFC ON or OFF condition, set the VTR as follows.
Preparation
* Set the Input Signal Selector to "Tuner".

(1) Press the PRESET/FINE/NORMAL Button. The indication on the Multi–Function Display changes from the clock indication to the position indication.
(2) Press the Channel Up or Down Button and Band/AFC button to select a programme position (channel) which you want to tune to a TV station.


Display of the programme positions 1-32
1 P o: 1
b: 1
Indication of the selected TV band
Selection of the Programme position

(3) Press the SEARCH /FINE Button until the picture of the desired station on your TV is satisfactory.


During the station search (The position indication flashes on and off.)
1 P o: 1
b: 1
Tuned condition/ When a station is tuned
1 P o: 1
b: 1

(4) Press the PRESET/NORMAL Button again. The indication on the Multi–Function Display changes to the clock indication.
* Now AFC is "ON" condition.
(5) Press the SEARCH/FINE button in a moment.
* Now AFC is "OFF" condition.

2-4-26. VIF SWEEP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP707	T703, X717, TUNER CONVERTER COIL		VIF SWEEP
TAPE	**M. EQ.**	**SPEC.**	
	VIF SWEEP/ MONITOR SCOPE	Refer to VIF Specification chart. (FIG. E23)	

1. Set the Tuner Set–up controls so that the modulated RF signal on the channel E10 is able to receive.
And set the DC power supply for 15V and suplly it to BT Terminal of the Tuner after cutting off the BT voltage from CH Select Pack C.B.A.
2. Set the AFC OFF condition.
3. Connect a jumper wire between AGC Terminal of the Tuner and GND.
4. Connect a capasitor (50V/1 uF) between TP703 and GND.
5. Connect the VIF sweep to the Tuner Test Point and connect the monitor scope to TP707 as shown in Fig. E20.

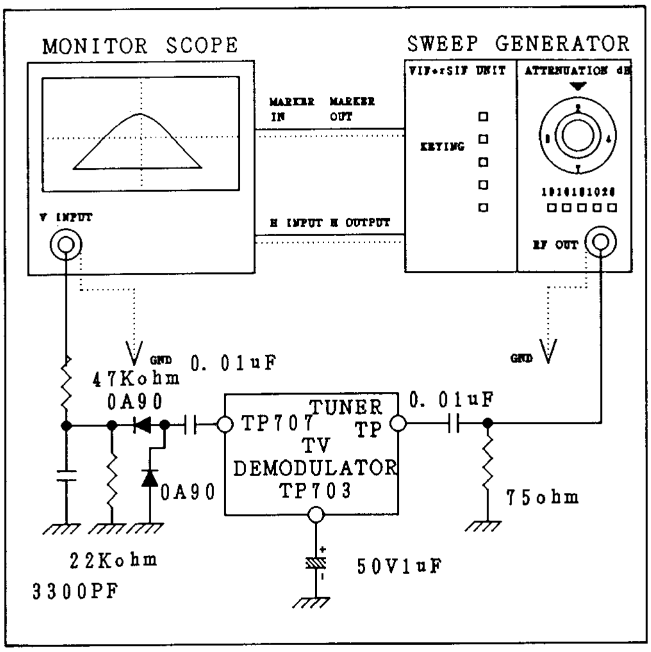

MONITOR SCOPE
SWEEP GENERATOR
VIF+SIF UNIT
ATTENUATION dB
MARKER IN
MARKER OUT
KEYING
V INPUT
H INPUT H OUTPUT
RF OUT
GND
GND
0. 01uF
47Kohm
0A90
TUNER
TP707
TP
TV DEMODULATOR
TP703
0. 01uF
0A90
75ohm
22Kohm
3300PF
50V1uF

FIG.E20

6. Adjust the output of the VIF sweep generator so that the sweep wave becomes 0.3Vp–p on the monitor scope.
7. Release the attenuator of the VIF sweep generator for 20dB.
8. Connect the JIG to both points TP709 and TV Demodulator C.B.A–(6).

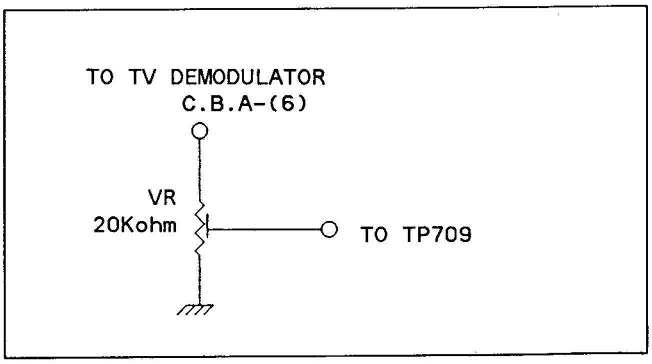

TO TV DEMODULATOR C.B.A-(6)
VR 20Kohm
TO TP709

FIG.E21

9. Adjust the VR of the Adjustment Jig. so that the sweep wave becomes 0.3Vp−p on the Monitor scope.

10. Adjust T703 so that the VCO beat is placed to center of waveform as shown below.

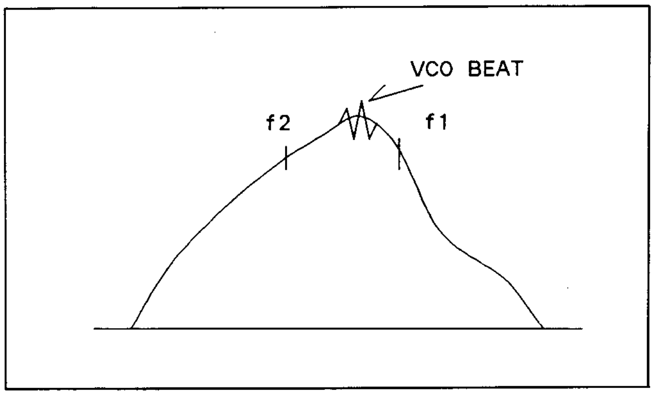


FIG.E22

11. Readjust the VR of the Adjustment Jig. so that the sweep wave becomes 0.3Vp−p on the monitor scope.
Adjust the T703 so that the waveform becomes as follows.

12. Preadjust the X717 & Tuner Converter Coil so that the sweep output waveform becomes maximum and then adjust the X717 & Tuner Converter Coil so that the waveform becomes as follows.

MODEL NO.		NV-H75EG
MARKER FREQUENCY	fs′	40.4MHz
	fp	38.9MHz
	f1	38.15MHz
	f2	35.22MHz
	fc	34.47MHz
	f3	33.97MHz
	fs	33.4MHz
	fp′	31.9MHz
SPECIFICATIONS	fp	30±5%
	fc	35±15%

FIG.E23

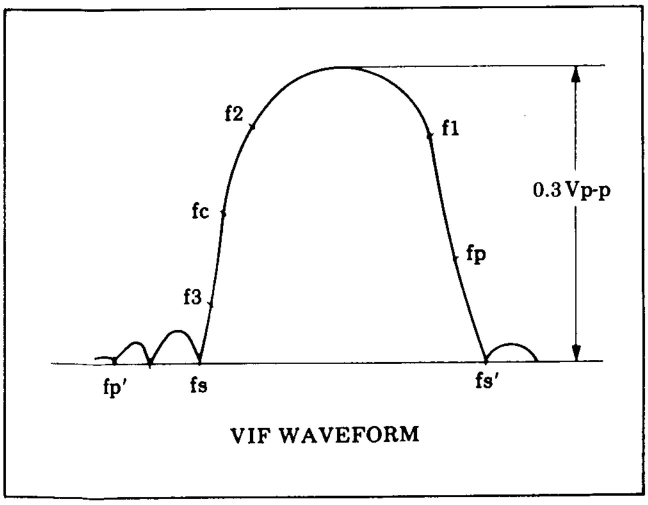


FIG.E24

2-4-27. VCO ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP703 (EG/EO/EV) TP704 (B)	T703		
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER/ TUNING AMPLIFIER	38.9MHz±10kHz	

1. Connect a Resistor (1Kohm) between TP709 and GND.
2. Connect the frequency counter to TP704 through the tuning amplifier.
3. Adjust T703 so that the reading of frequency counter is 38.9MHz +− 10KHz.

2-4-28. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
AFC TERMINAL OF THE TUNER	T704		CW SIGNAL (1 Vrms)
TAPE	**M. EQ.**	**SPEC.**	
	CW OSCILLATOR/ D.V.M.	A=38.9MHz	

1. Set the Tuner Set−up controls so that the modulated RF signal on the channel E10 is able to receive.
And set the DC power supply for 15 +− 1V and supply it to BT Terminal of the Tuner after cutting off the BT voltage from the CH Select Pack C.B.A.
2. Set the CW oscillator output for "A" MHz and 1Vrms. Connect the CW oscillator output to the Tuner Test Point.
3. Connect the D.V.M. to the AFC terminal of the tuner.
4. Read the value "B" of the D.V.M., when the AFC is OFF condition.
5. Set the AFC ON condition and adjust T704 for "B" +− 0.3V.
6. Change the frequency of the CW oscillator to "A" (MHz) +− 100KHz, and confirm the difference of the AFC votage is more than +−2V respective.

DECODER SECTION

2-4-29. TEST EQUIPMENTS

To make adjustment completely, following equipments are required.

1. Degital Volt Meter (D.V.M)
2. Oscilloscope
3. Multi Voice Modulator (M.V.M)
4. Frequency counter
5. Noise meter
6. Distortion Meter

Note:

1).To make this adjustment, set the Demodulator Unit as shown in FIG.E19.

2).If output of M.V.M is not indicated,output must be follows.

CH: E10 (Philips Pattern)
Video Modulation: 87.5%
Output: 75dBu
Audio: 1KHz ,100% modulation
(30KHz DEV.)

2-4-30. FM DETECTION TRANSFORMER ADJUSTMENT

TP	ADJ.	MODE	INPUT
DECODER C.B.A. -(11): (L) -(12): (R)	T753 (L) T752 (R)		M.V.M (CHE10)
TAPE	**M. EQ.**	**SPEC.**	
	M.V.M./ OSCILLO-SCOPE/ PATTERN GENERATOR /DISTORTION METER	DISTORTION RATE (L) Less than 1.8% (R) Less than 1.0% OUTPUT LEVEL: MAXIMUM	

1. Supply a video signal (PHILIPS pattern) from the pattern generator to the input of the M.V.M.
2. Connect the output of the M.V.M to RF Input of the Deck.
3. Press the SEARCH /FINE button so that the modulated RF signal on the channel E10 is able to receive.
4. Set the AFC ON condition.
5. Connect the oscilloscope and destortion meter to Decoder C.B.A–(11).
6. Adjust T753 so that the output level on the oscilloscope becomes maximum and destortion meter becomes MINIMUM.
7. Connect the oscilloscope and destortion meter to Decoder C.B.A–(12).
8. Adjust T752 so that the output level on the oscilloscope becomes maximum becomes MINIMUM.

2-4-31. SOUND MULTIPLEX DETECTION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7303 TP7304	VR7326 VR7328		M.V.M (CH10)
TAPE	**M. EQ.**	**SPEC.**	
	M.V.M/ OSCILLO-SCOPE/ PATTERN GENERATOR	WAVEFORM IS MAXIMIZED MORE THAN 5 Vp-p	

1. Supply a video signal (PHILIPS pattern) from the pattern generator to the input of the M.V.M.
2. Connect the output of the M.V.M to RF Input of the Deck.
3. Press the SEARCH / FINE BUTTON so that the modulated RF signal on the channel E10 is able to receive.
4. Set the AFC ON condition.
5. Connect the oscilloscope to TP7303.
6. Set the mode switch of the M.V.M to STEREO mode.
7. Adjust VR7326 mutually so that the waveform (117.5Hz) is maximized and then confirm that the STEREO LED on the Deck just lights up. Change the output level of the M.V.M to 45dBu. And then adjust T7301 mutually so that the waveform (117.5Hz) is maximized and then confirm that the STEREO LED on the Deck just lights up.
8. Re–set the mode switch of the M.V.M to Multiplex mode.
9. Re–connect the oscilloscope to TP7304.
10. Adjust VR7328 so that the waveform (274.1Hz) is maximized and then confirm that the Multiplex LED on the Deck just lights up.

Note:

Confirm that the level of the waveforms (117.5Hz and 274.1Hz) are more than 5Vp–p.

2-4-32. STEREO SEPARATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
DECODER C.B.A.-(11)	VR7301		M.V.M (CH 10)
TAPE	**M. EQ.**	**SPEC.**	
	M.V.M/ PATTERN GENERATOR/ NOISE METER	LEVEL IS REMAINDER MORE THAN 30dB	

1. Supply a video signal (PHILIPS pattern) from the pattern generator to the input of the
2. Connect the output of the M.V.M to RF Input of the Deck.
3. Press the SEARCH / FINE BUTTON so that the modulated RF signal on the channnel E10 is able to receive.
4. Set the AFC ON condition.
5. Connect the noise meter to Decoder C.B.A–(11).
6. Set the mode switch of the M.V.M to LEFT mode.

7. Read the value "A" of the noise meter, when the mode switch of the M.V.M to LEFT mode.
8. Re–set the mode switch of the M.V.M to RIGHT mode.
9. Adjust VR7301 so that the reading of the noise meter becomes minimum and read the value "B" of the noise meter, when the mode switch of the M.V.M to RIGHT mode.
10. Find the remainder of "A" and "B". Confirm the find one is more than 30dB.

2-4-33. AUDIO OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
DECODER C.B.A. -(11): (L) -(12): (R)	VR7344 (L) VR7340 (R)		M.V.M (CHE10)
TAPE	**M. EQ.**	**SPEC.**	
	M.V.M/ NOISE METER/ PATTERN GENERATOR	100±5mVrms	

1. Supply a video signal (PHILIPS pattern) from the pattern generator to the input of the
2. Connect the output of the M.V.M to RF Input of the Deck.
3. Press the SEARCH / FINE BUTTON so that the modulated RF signal on the channel E10 is able to receive.
4. Set the AFC ON condition.
5. Set the mode switch of the M.V.M to LEFT mode.
6. Connect the noise meter to Decoder C.B.A.–(11).
7. Adjust VR7344 for 100 +– 5mVrms.
8. Re–set the mode switch of the M.V.M to RIGHT mode.
9. Re–connect the noise meter to Decoder C.B.A–(12).
10. Adjust VR7340 for 100 +– 5mVrms.

2-4-34. MAIN AUDIO OUTPUT LEVEL ADJUSTMENT

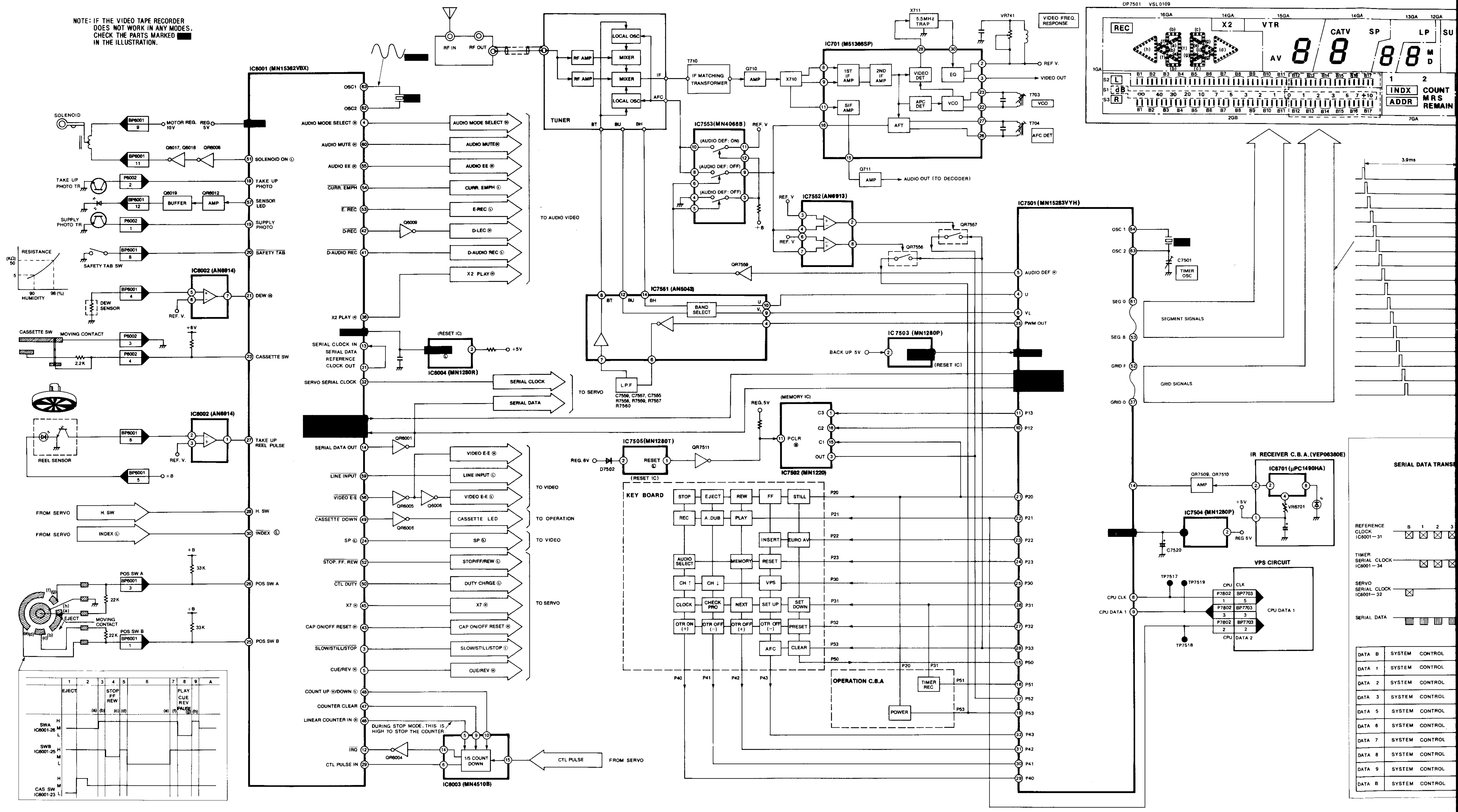
TP	ADJ.	MODE	INPUT
DECODER C.B.A.-(9)	VR751		M.V.M (CHE10)
TAPE	**M. EQ.**	**SPEC.**	
	M.V.M/ NOISE METER/ PATTERN GENERATOR	85±5mVrms	

1. Supply a video signal (PHILIPS pattern) from 1the pattern generator to the input of the M.V.M.
2. Connect the output of the M.V.V to RF Input of the Deck.
3. Press the SEARCH / FINE BUTTON so that the modulated RF signal on the channel E10 is received.
4. Set the AFC ON condition.
5. Set the mode switch of the M.V.M to NORMAL mode.
6. Connect the noise meter to the Decoder C.B.A–(9).
7. Adjust VR751 for 85 +– 5mVrms.

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

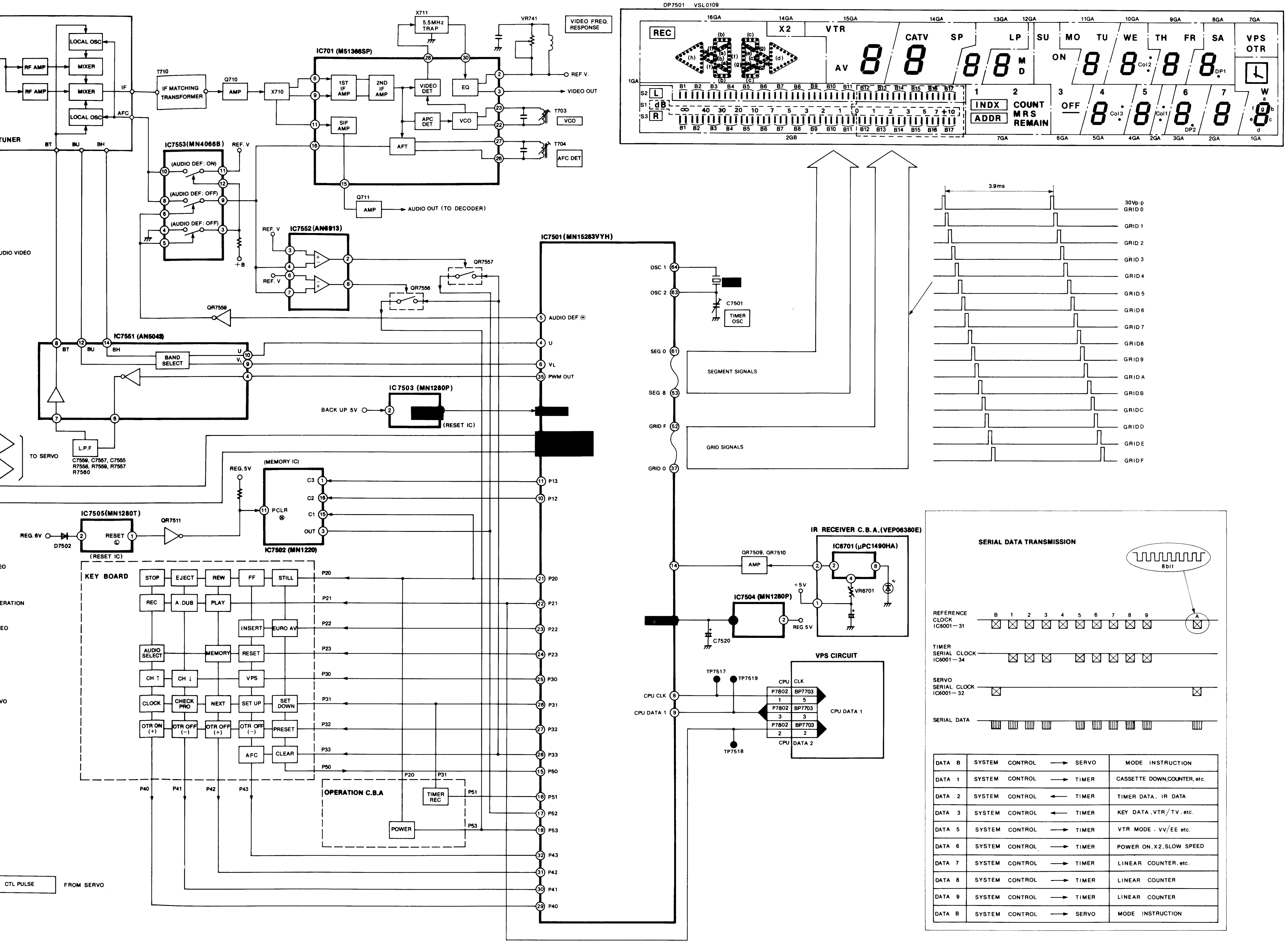
3-1. SYSTEM CONTROL BLOCK DIAGRAM

NOTE: IF THE VIDEO TAPE RECORDER DOES NOT WORK IN ANY MODES. CHECK THE PARTS MARKED ■ IN THE ILLUSTRATION.



IC6001 (MN15362VBX)
SOLENOID
MOTOR REG. 10V
REG 5V
SOLENOID ON Ⓛ
Q6017, Q6018
QR6008
TAKE UP PHOTO TR
TAKE UP PHOTO
SENSOR LED
BUFFER
AMP
Q6019
QR6012
SUPPLY PHOTO TR
SUPPLY PHOTO
SAFETY TAB
SAFETY TAB SW
RESISTANCE (KΩ)
HUMIDITY
IC6002 (AN6914)
DEW Ⓗ
DEW SENSOR
REF. V.
CASSETTE SW
MOVING CONTACT
CASSETTE SW
REEL SENSOR
TAKE UP REEL PULSE
FROM SERVO
H. SW
INDEX Ⓛ
POS SW A
POS SW B
EJECT
MOVING CONTACT
STOP FF REW
PLAY CUE REV PAUSE
SWA IC6001-26
SWB IC6001-25
CAS SW IC6001-23
OSC1
OSC2
AUDIO MODE SELECT Ⓗ
AUDIO MUTE Ⓗ
AUDIO EE Ⓗ
CURR. EMPH
E. REC
D-REC
D-AUDIO REC
X2 PLAY Ⓗ
TO AUDIO VIDEO
Q6009
SERIAL CLOCK IN
SERIAL DATA REFERENCE CLOCK OUT
(RESET IC)
IC6004 (MN1280R)
SERVO SERIAL CLOCK
SERIAL CLOCK
SERIAL DATA
TO SERVO
SERIAL DATA OUT
QR6001
VIDEO E-E Ⓗ
LINE INPUT
VIDEO E-E
QR6005
Q6006
CASSETTE DOWN
CASSETTE LED
TO VIDEO
TO OPERATION
SP Ⓛ
STOP. FF. REW
CTL DUTY
X7 Ⓗ
CAP ON/OFF RESET Ⓗ
SLOW/STILL/STOP
CUE/REV Ⓗ
COUNT UP Ⓗ/DOWN Ⓛ
COUNTER CLEAR
LINEAR COUNTER IN Ⓗ
DURING STOP MODE, THIS IS HIGH TO STOP THE COUNTER
IRQ
QR6004
CTL PULSE IN
1/5 COUNT DOWN
IC6003 (MN4510B)
CTL PULSE
RF IN
RF OUT
TUNER
RF AMP
LOCAL OSC
MIXER
IF
AFC
BT
BU
BH
T710
IF MATCHING TRANSFORMER
Q710
AMP
X710
X711
5.5MHz TRAP
VR741
VIDEO FREQ. RESPONSE
IC701 (M51366SP)
1ST IF AMP
2ND IF AMP
VIDEO DET
EQ
APC DET
VCO
AFT
SIF AMP
REF. V.
VIDEO OUT
T703
T704
AFC DET
Q711
AUDIO OUT (TO DECODER)
IC7553 (MN4066B)
(AUDIO DEF: ON)
(AUDIO DEF: OFF)
IC7552 (AN6913)
QR7557
QR7556
QR7559
IC7561 (AN5043)
BAND SELECT
LPF
C7559, C7557, C7555, R7558, R7559, R7557, R7560
IC7503 (MN1280P)
BACK UP 5V
(RESET IC)
(MEMORY IC)
PCLR
IC7502 (MN1220)
IC7505 (MN1280T)
RESET
QR7511
REG. 6V
D7502
KEY BOARD
STOP
EJECT
REW
FF
STILL
REC
A.DUB
PLAY
INSERT
EURO AV
AUDIO SELECT
MEMORY
RESET
CH ↑
CH ↓
VPS
CLOCK
CHECK PRO
NEXT
SET UP
SET DOWN
OTR ON (+)
OTR OFF (−)
OTR OFF (+)
OTR OFF (−)
PRESET
AFC
CLEAR
OPERATION C.B.A
TIMER REC
POWER
IC7501 (MN15283VYH)
AUDIO DEF Ⓗ
PWM OUT
C7501
TIMER OSC
SEG 0
SEG 8
GRID F
GRID 0
SEGMENT SIGNALS
GRID SIGNALS
DP7501 VSL0109
REC
X2
VTR
CATV
SP
LP
AV
INDX
ADDR
COUNT
MRS
REMAIN
3.9ms
IR RECEIVER C.B.A. (VEP06380E)
IC6701 (μPC1490HA)
QR7509, QR7510
VR6701
REG 5V
IC7504 (MN1280P)
C7520
VPS CIRCUIT
CPU CLK
CPU DATA 1
CPU DATA 2
TP7517
TP7518
TP7519
SERIAL DATA TRANS
REFERENCE CLOCK IC6001-31
TIMER SERIAL CLOCK IC6001-34
SERVO SERIAL CLOCK IC6001-32
SERIAL DATA
DATA B SYSTEM CONTROL
DATA 1 SYSTEM CONTROL
DATA 2 SYSTEM CONTROL
DATA 3 SYSTEM CONTROL
DATA 5 SYSTEM CONTROL
DATA 6 SYSTEM CONTROL
DATA 7 SYSTEM CONTROL
DATA 8 SYSTEM CONTROL
DATA 9 SYSTEM CONTROL
DATA B SYSTEM CONTROL

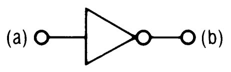
RAMS


TUNER
RF AMP
RF AMP
LOCAL OSC
MIXER
MIXER
LOCAL OSC
IF
AFC
BT
BU
BH
T710
IF MATCHING TRANSFORMER
Q710
AMP
X710
X711
5.5MHz TRAP
IC701 (M51366SP)
1ST IF AMP
2ND IF AMP
VIDEO DET
EQ
APC DET
VCO
SIF AMP
AFT
VR741
VIDEO FREQ. RESPONSE
REF V.
VIDEO OUT
T703
VCO
T704
AFC DET
Q711
AMP
AUDIO OUT (TO DECODER)
IC7553(MN4066B)
REF. V
(AUDIO DEF: ON)
(AUDIO DEF: OFF)
(AUDIO DEF: OFF)
+B
AUDIO VIDEO
IC7552 (AN6913)
REF. V
REF. V
QR7557
QR7556
QR7559
IC7551 (AN5043)
BT
BU
BH
BAND SELECT
U
VL
L.P.F
C7559, C7557, C7555
R7558, R7559, R7557
R7560
TO SERVO
IC7501 (MN15283VYH)
AUDIO DEF Ⓗ
U
VL
PWM OUT
IC7503 (MN1280P)
BACK UP 5V
[redacted]
(RESET IC)
[redacted]
[redacted]
REG.5V
(MEMORY IC)
C3
C2
C1
OUT
PCLR Ⓗ
IC7502 (MN1220)
P13
P12
IC7505(MN1280T)
REG.6V
D7502
RESET Ⓛ
(RESET IC)
QR7511
KEY BOARD
STOP
EJECT
REW
FF
STILL
REC
A.DUB
PLAY
INSERT
EURO AV
AUDIO SELECT
MEMORY
RESET
CH ↑
CH ↓
VPS
CLOCK
CHECK PRO
NEXT
SET UP
SET DOWN
OTR ON (+)
OTR OFF (−)
OTR OFF (+)
OTR OFF (−)
PRESET
AFC
CLEAR
P20
P21
P22
P23
P30
P31
P32
P33
P50
P40
P41
P42
P43
OPERATION C.B.A
TIMER REC
POWER
P51
P52
P53
CTL PULSE
FROM SERVO
OSC 1
OSC 2
[redacted]
C7501
TIMER OSC
SEG 0
SEG 8
GRID F
GRID 0
SEGMENT SIGNALS
GRID SIGNALS
QR7509, QR7510
AMP
IR RECEIVER C.B.A.(VEP06380E)
IC6701 (μPC1490HA)
VR6701
+5V
[redacted]
IC7504 (MN1280P)
REG 5V
C7520
VPS CIRCUIT
TP7517
TP7519
TP7518
CPU CLK
CPU DATA 1
CPU CLK
P7802 BP7703
CPU DATA 1
CPU DATA 2
DP7501 VSL0109
REC
X2
VTR
AV
CATV
SP
LP
M
D
SU
MO
TU
WE
TH
FR
SA
ON
VPS
OTR
Col2
DP1
L
dB
R
S1
S2
S3
B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17
∞ 40 30 20 10 7 5 3 2 1 0 1 2 3 5 7 +10
INDX
ADDR
COUNT
MRS
REMAIN
OFF
Col3
Col1
DP2
W
16GA 14GA 15GA 14GA 13GA 12GA 11GA 10GA 9GA 8GA 7GA
1GA 2GB 7GA 6GA 5GA 4GA 2GA 3GA 2GA 1GA
3.9ms
30Vp-p
GRID 0
GRID 1
GRID 2
GRID 3
GRID 4
GRID 5
GRID 6
GRID 7
GRID 8
GRID 9
GRID A
GRID B
GRID C
GRID D
GRID E
GRID F
SERIAL DATA TRANSMISSION
8bit
REFERENCE CLOCK IC6001—31
TIMER SERIAL CLOCK IC6001—34
SERVO SERIAL CLOCK IC6001—32
SERIAL DATA
B 1 2 3 4 5 6 7 8 9 A

DATA B	SYSTEM CONTROL ⟶ SERVO	MODE INSTRUCTION
DATA 1	SYSTEM CONTROL ⟶ TIMER	CASSETTE DOWN,COUNTER, etc.
DATA 2	SYSTEM CONTROL ⟵ TIMER	TIMER DATA, IR DATA
DATA 3	SYSTEM CONTROL ⟵ TIMER	KEY DATA, VTR/TV, etc.
DATA 5	SYSTEM CONTROL ⟶ TIMER	VTR MODE, VV/EE etc.
DATA 6	SYSTEM CONTROL ⟶ TIMER	POWER ON, X2, SLOW SPEED
DATA 7	SYSTEM CONTROL ⟶ TIMER	LINEAR COUNTER, etc.
DATA 8	SYSTEM CONTROL ⟶ TIMER	LINEAR COUNTER
DATA 9	SYSTEM CONTROL ⟶ TIMER	LINEAR COUNTER
DATA B	SYSTEM CONTROL ⟶ SERVO	MODE INSTRUCTION

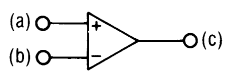
SYMBOL | **TRUTH VALUE TABLE**

INVERTER



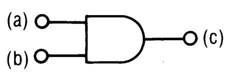
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



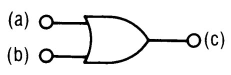
IN	(a) (b)	(a) > (b)	(a) < (b)
OUT	(c)	H	L

AND CIRCUIT



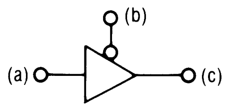
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

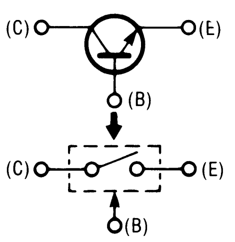
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

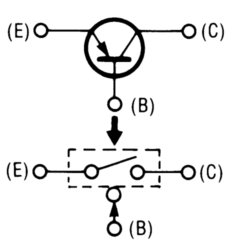
※ High Impedance

TR. SW (NPN TYPE)



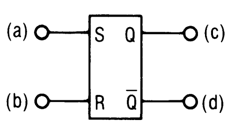
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

R-S TYPE FLIP-FLOP

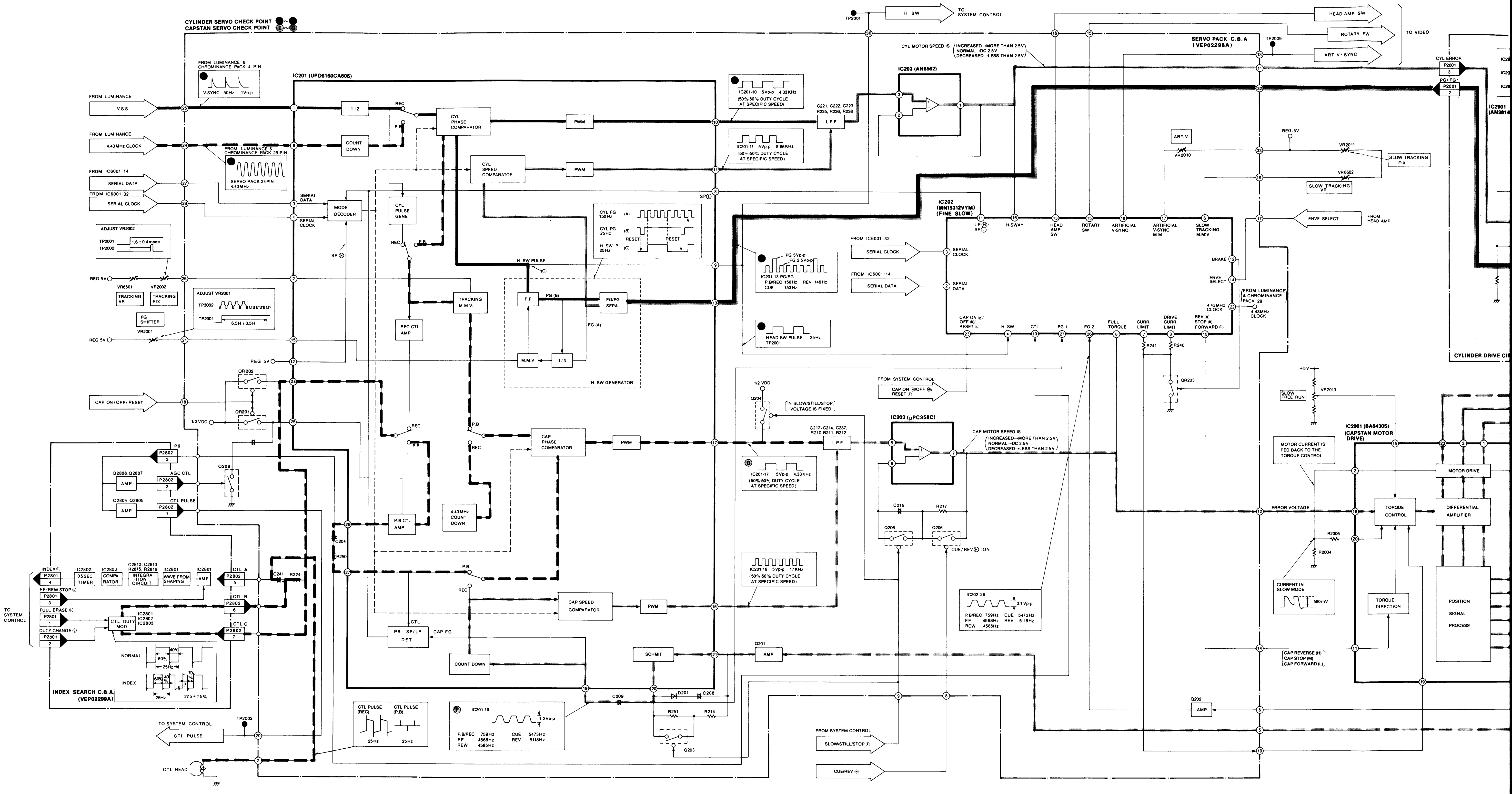


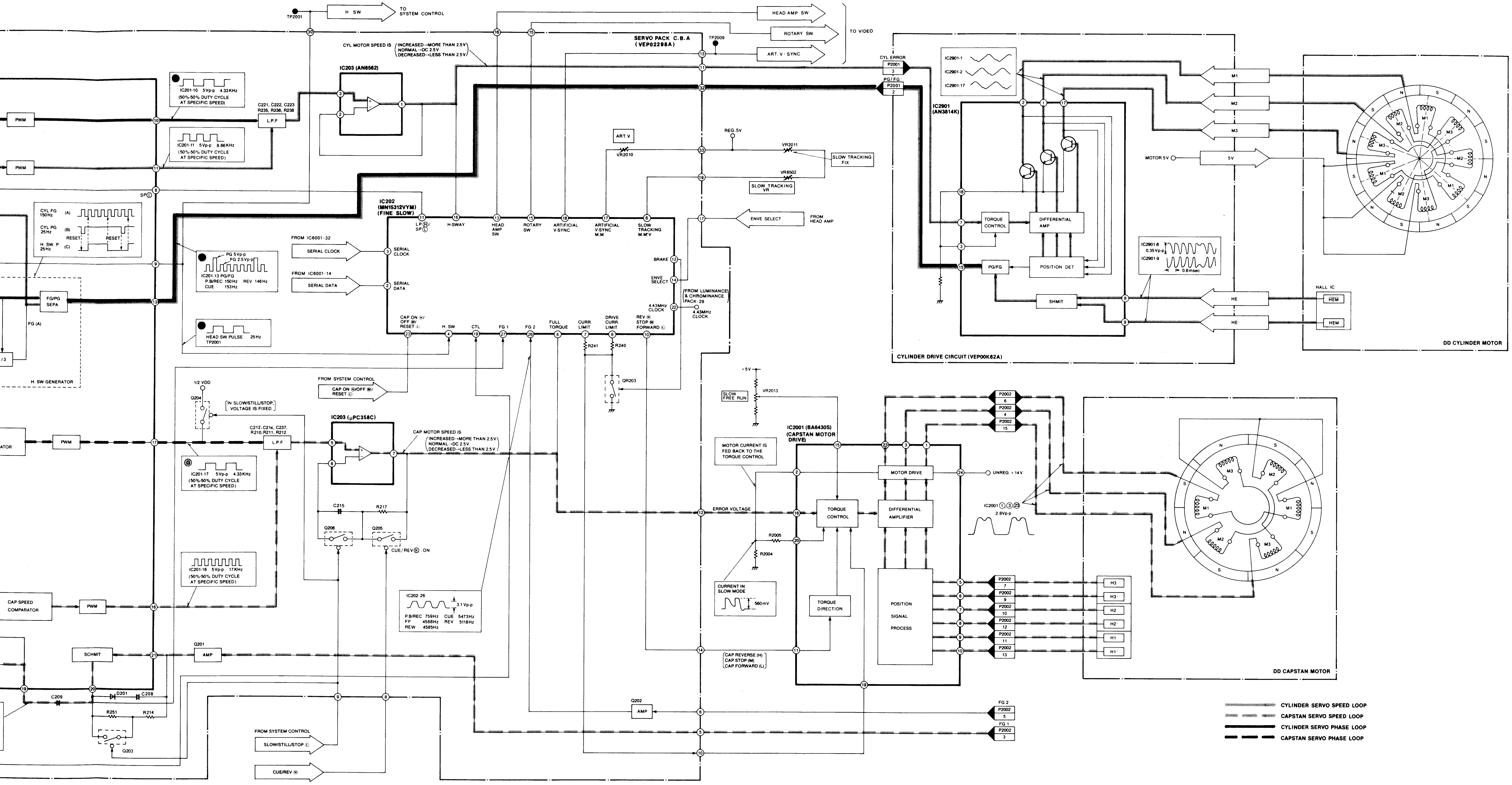
IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reverced.

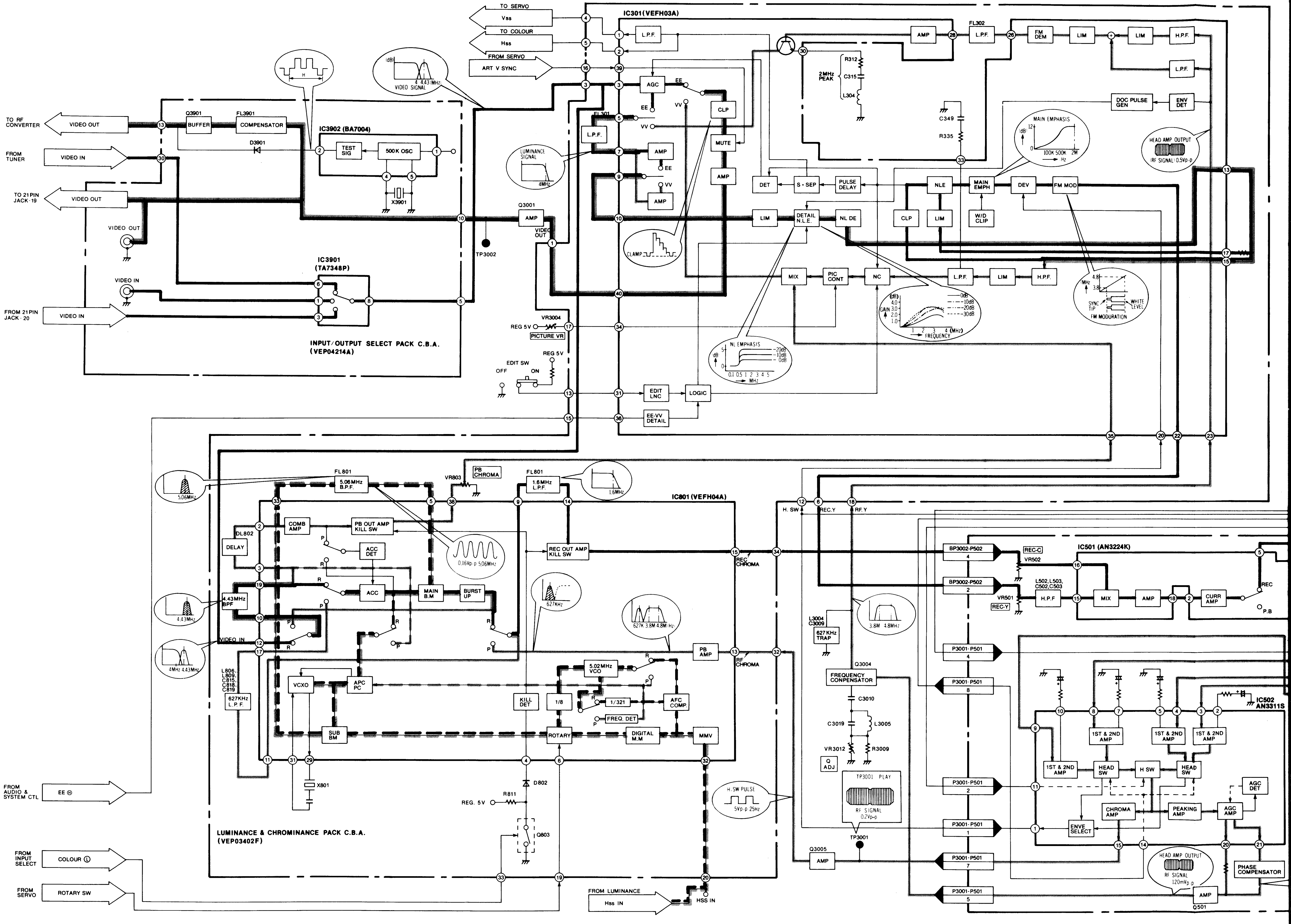
Next Page:
SERVO Section

3-2. SERVO BLOCK DIAGRAM


CYLINDER SERVO CHECK POINT Ⓐ~Ⓓ
CAPSTAN SERVO CHECK POINT Ⓔ~Ⓖ
FROM LUMINANCE & CHROMINANCE PACK 4 PIN
V-SYNC 50Hz 1Vp-p
FROM LUMINANCE
V.S.S
FROM LUMINANCE
4.43MHz CLOCK
FROM LUMINANCE & CHROMINANCE PACK 29 PIN
SERVO PACK 24PIN 4.43MHz
FROM IC6001-14
SERIAL DATA
FROM IC6001-32
SERIAL CLOCK
ADJUST VR2002
TP2001
TP2002
1.6 ± 0.4msec
REG 5V
VR6501
VR2002
TRACKING VR
TRACKING FIX
PG SHIFTER
VR2001
ADJUST VR2001
TP3002
6.5H ± 0.5H
REG. 5V
QR202
QR201
1/2 VDD
CAP ON/OFF/RESET
IC201 (UPD6160CA606)
1/2
REC
P.B
CYL PHASE COMPARATOR
PWM
COUNT DOWN
CYL SPEED COMPARATOR
SERIAL DATA
SERIAL CLOCK
MODE DECODER
CYL PULSE GENE
SP Ⓗ
SP Ⓛ
H. SW PULSE
CYL FG 150Hz (A)
CYL PG 25Hz (B)
H. SW. P 25Hz (C)
RESET
TRACKING M.M.V
F.F
PG (B)
FG/PG SEPA
FG (A)
REC CTL AMP
M.M.V
1/3
H. SW GENERATOR
IC201-10 5Vp-p 4.33KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
IC201-11 5Vp-p 8.66KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
PG 5Vp-p
FG 2.5Vp-p
IC201-13 PG/FG
P.B/REC 150Hz REV 146Hz
CUE 153Hz
HEAD SW PULSE 25Hz
TP2001
TP2001
H SW
TO SYSTEM CONTROL
C221, C222, C223
R235, R236, R238
L.P.F
IC203 (AN6562)
CYL MOTOR SPEED IS (INCREASED→MORE THAN 2.5V / NORMAL→DC 2.5V / DECREASED→LESS THAN 2.5V)
SERVO PACK C.B.A (VEP02298A)
TP2009
HEAD AMP SW
ROTARY SW
ART. V · SYNC
TO VIDEO
CYL ERROR
P2001
PG/FG
IC2901 (AN3814
ART. V
VR2010
REG. 5V
VR2011
SLOW TRACKING FIX
VR6502
SLOW TRACKING VR
IC202 (MN15312VYM) (FINE SLOW)
LP Ⓗ/SP Ⓛ
H-SWAY
HEAD AMP SW
ROTARY SW
ARTIFICIAL V-SYNC
ARTIFICIAL V-SYNC M.M
SLOW TRACKING M.M'V
ENVE SELECT
FROM HEAD AMP
FROM IC6001-32
SERIAL CLOCK
FROM IC6001-14
SERIAL DATA
BRAKE
ENVE SELECT
(FROM LUMINANCE & CHROMINANCE PACK-29
4.43MHz CLOCK
CAP ON Ⓗ/OFF Ⓜ/RESET Ⓛ
H. SW
CTL
FG 1
FG 2
FULL TORQUE
CURR LIMIT
DRIVE CURR LIMIT
REV Ⓗ STOP Ⓜ FORWARD Ⓛ
R241
R240
QR203
CYLINDER DRIVE CIR
FROM SYSTEM CONTROL
CAP ON Ⓗ/OFF Ⓜ/RESET Ⓛ
1/2 VDD
Q204
IN SLOW/STILL/STOP, VOLTAGE IS FIXED.
C212, C214, C237, R210, R211, R212
L.P.F
IC203 (μPC358C)
CAP MOTOR SPEED IS (INCREASED→MORE THAN 2.5V / NORMAL→DC 2.5V / DECREASED→LESS THAN 2.5V)
C215
R217
Q206
Q205
CUE/REV Ⓗ · ON
+5V
VR2013
SLOW FREE RUN
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
IC2001 (BA6430S) (CAPSTAN MOTOR DRIVE)
MOTOR DRIVE
ERROR VOLTAGE
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
R2005
R2004
CURRENT IN SLOW MODE
580mV
TORQUE DIRECTION
POSITION SIGNAL PROCESS
CAP REVERSE (H)
CAP STOP (M)
CAP FORWARD (L)
IC202-26
3.1Vp-p
P.B/REC 759Hz CUE 5473Hz
FF 4568Hz REV 5118Hz
REW 4585Hz
P.B
REC
CAP PHASE COMPARATOR
PWM
IC201-17 5Vp-p 4.33KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
4.43MHz COUNT DOWN
P.B CTL AMP
IC201-16 5Vp-p 17KHz
(50%-50% DUTY CYCLE AT SPECIFIC SPEED)
CAP SPEED COMPARATOR
PWM
CTL
PB SP/LP DET
CAP FG
COUNT DOWN
SCHMIT
Q201
AMP
D201
C208
C209
R251
R214
Q203
Q202
AMP
FROM SYSTEM CONTROL
SLOW/STILL/STOP Ⓛ
CUE/REV Ⓗ
P0
P2802
Q2806, Q2807
AMP
AGC CTL
Q2804, Q2805
CTL PULSE
Q208
INDEX Ⓛ
P2801
IC2802 0.5SEC TIMER
IC2803 COMPA RATOR
C2812, C2813 R2815, R2816 INTEGRA TION CIRCUIT
IC2801 WAVE FROM SHAPING
IC2801 AMP
CTL A
FF/REW STOP Ⓛ
FULL ERASE Ⓛ
CTL B
IC2801 IC2802 IC2803
CTL DUTY MOD
DUTY CHANGE Ⓛ
CTL C
TO SYSTEM CONTROL
C241
R224
C204
R250
NORMAL
60%
40%
25Hz
INDEX
70%
275 ± 2.5%
INDEX SEARCH C.B.A. (VEP02299A)
CTL PULSE (REC)
CTL PULSE (P.B)
25Hz
25Hz
IC201-19
1.2Vp-p
P.B/REC 759Hz CUE 5473Hz
FF 4568Hz REV 5118Hz
REW 4585Hz
TO SYSTEM CONTROL
TP2002
CTL PULSE
CTL HEAD

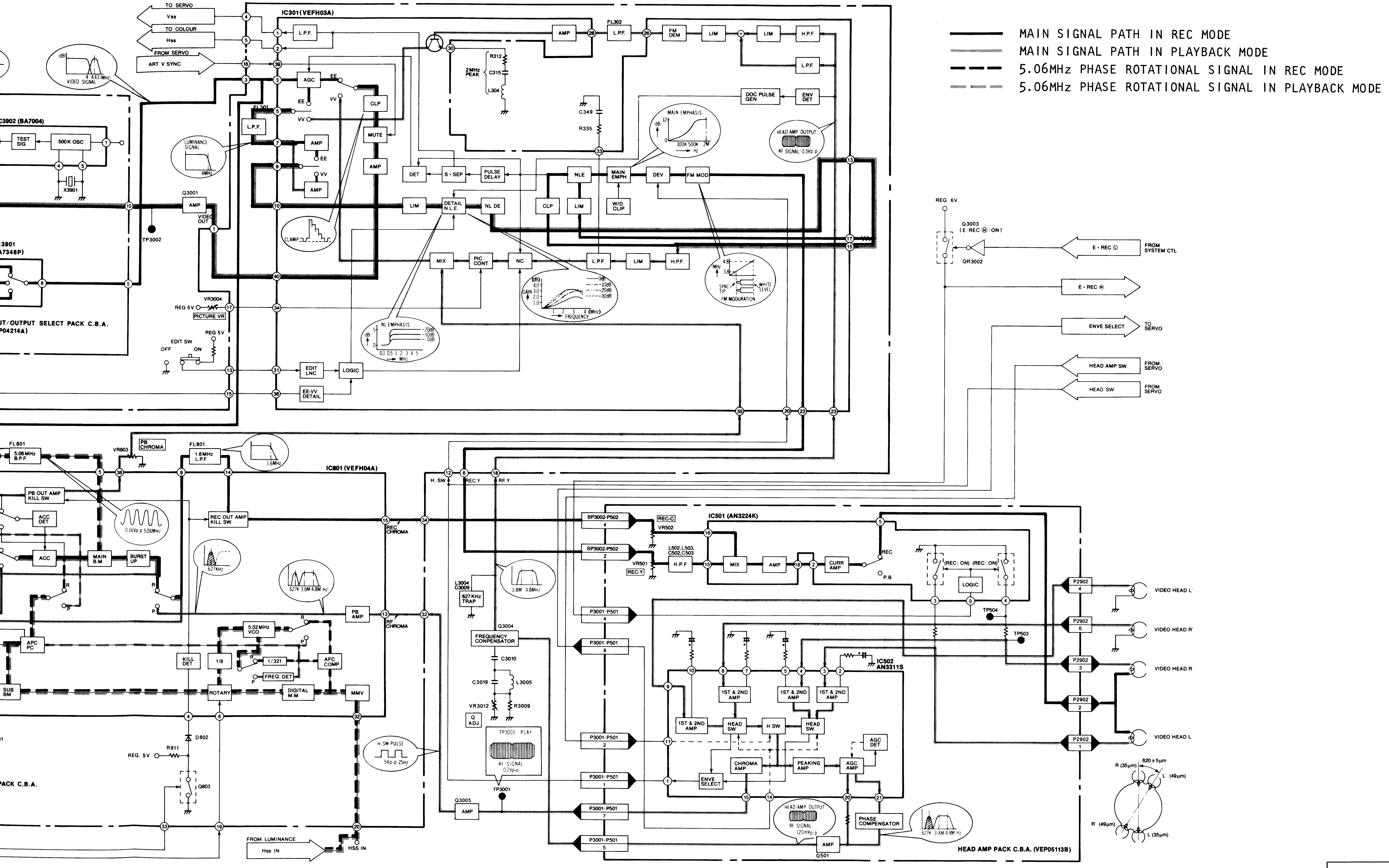

TP2001
H. SW
TO SYSTEM CONTROL
HEAD AMP SW
ROTARY SW
ART. V · SYNC
TO VIDEO
TP2009
SERVO PACK C.B.A (VEP02298A)
CYL MOTOR SPEED IS (INCREASED→MORE THAN 2.5V / NORMAL→DC 2.5V / DECREASED→LESS THAN 2.5V)
IC203 (AN6562)
IC201-10 5Vp-p 4.33KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
IC201-11 5Vp-p 8.66KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
C221, C222, C223 R235, R236, R238
L.P.F
PWM
SP
CYL FG 150Hz (A)
CYL PG 25Hz (B)
H. SW. P 25Hz (C)
RESET
PG 5Vp-p FG 2.5Vp-p
IC201-13 PG/FG P.B/REC 150Hz REV 146Hz CUE 153Hz
HEAD SW PULSE 25Hz TP2001
FG/PG SEPA
FG (A)
H. SW GENERATOR
ART.V
VR2010
REG. 5V
VR2011
SLOW TRACKING FIX
VR6502
SLOW TRACKING VR
IC202 (MN15312VYM) (FINE SLOW)
LP (H)/ SP (L)
H-SWAY
HEAD AMP SW
ROTARY SW
ARTIFICIAL V-SYNC
ARTIFICIAL V-SYNC M.M
SLOW TRACKING M.M'V
ENVE SELECT
FROM HEAD AMP
FROM IC6001-32
SERIAL CLOCK
FROM IC6001-14
SERIAL DATA
BRAKE
ENVE SELECT
(FROM LUMINANCE & CHROMINANCE PACK-29
4.43MHz CLOCK
CAP ON (H) OFF (M) RESET (L)
H. SW
CTL
FG 1
FG 2
FULL TORQUE
CURR LIMIT
DRIVE CURR. LIMIT
REV (H) STOP (M) FORWARD (L)
R241
R240
QR203
FROM SYSTEM CONTROL
CAP ON (H)/OFF (M)/ RESET (L)
1/2 VDD
Q204
(IN SLOW/STILL/STOP, VOLTAGE IS FIXED.)
C212-C214, C237, R210, R211, R212
IC203 (μPC358C)
CAP MOTOR SPEED IS (INCREASED→MORE THAN 2.5V / NORMAL→DC 2.5V / DECREASED→LESS THAN 2.5V)
IC201-17 5Vp-p 4.33KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
C215
R217
Q206
Q205
CUE/REV (H) ON
IC201-16 5Vp-p 17KHz (50%-50% DUTY CYCLE AT SPECIFIC SPEED)
CAP SPEED COMPARATOR
IC202-26 3.1 Vp-p
P.B/REC 759Hz CUE 5473Hz
FF 4568Hz REV 5118Hz
REW 4585Hz
SCHMIT
Q201
AMP
C209
D201
C208
R251
R214
Q203
FROM SYSTEM CONTROL
SLOW/STILL/STOP (L)
CUE/REV (H)
Q202
AMP
CYL ERROR
P2001 3
PG/FG
P2001 2
IC2901-1
IC2901-2
IC2901-17
IC2901 (AN3814K)
M1
M2
M3
MOTOR 5V
5V
TORQUE CONTROL
DIFFERENTIAL AMP
PG/FG
POSITION DET
SHMIT
IC2901-8 0.35Vp-p
IC2901-9
0.8msec
HE
HE-
HALL IC
HEM
CYLINDER DRIVE CIRCUIT (VEP00K62A)
DD CYLINDER MOTOR
N
S
+5V
VR2013
SLOW FREE RUN
IC2001 (BA6430S) (CAPSTAN MOTOR DRIVE)
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
ERROR VOLTAGE
MOTOR DRIVE
UNREG +14V
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
R2005
R2004
IC2001 ① ③ ㉓ 2.8Vp-p
CURRENT IN SLOW MODE
560mV
TORQUE DIRECTION
POSITION SIGNAL PROCESS
CAP REVERSE (H) CAP STOP (M) CAP FORWARD (L)
P2002 6
P2002 4
P2002 15
P2002 7
P2002 9
P2002 10
P2002 12
P2002 11
P2002 13
H3
H3-
H2
H2-
H1
H1-
DD CAPSTAN MOTOR
FG 2 P2002 5
FG 1 P2002 3
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
CAPSTAN SERVO PHASE LOOP

3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM



TO SERVO
Vss
TO COLOUR
Hss
FROM SERVO
ART V SYNC
IC301 (VEFH03A)
L.P.F.
AMP
FL302
FM DEM
LIM
H.P.F.
2MHz PEAK
R312
C315
L304
C349
R335
AGC
EE
VV
CLP
MUTE
FL301
LUMINANCE SIGNAL
4MHz
CLAMP
DET
S·SEP
PULSE DELAY
DOC PULSE GEN
ENV DET
MAIN EMPHASIS
100K 500K 2M
NLE
MAIN EMPH
DEV
FM MOD
W/D CLIP
LIM
DETAIL N.L.E.
NL DE
CLP
MIX
PIC CONT
NC
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
FREQUENCY (MHz)
GAIN
NL EMPHASIS
SYNC TIP
WHITE LEVEL
FM MODURATION
TO RF CONVERTER
VIDEO OUT
FROM TUNER
VIDEO IN
TO 21PIN JACK-19
FROM 21PIN JACK-20
Q3901
BUFFER
FL3901
COMPENSATOR
IC3902 (BA7004)
D3901
TEST SIG
500K OSC
X3901
VIDEO SIGNAL
4.43(MHz)
IC3901 (TA7348P)
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04214A)
Q3001
VIDEO OUT
TP3002
REG 5V
VR3004
PICTURE VR
EDIT SW
OFF
ON
EDIT LNC
LOGIC
EE-VV DETAIL
FL801
5.06MHz B.P.F.
VR803
PB CHROMA
1.6MHz L.P.F.
IC801 (VEFH04A)
5.06MHz
1.6MHz
DL802
DELAY
COMB AMP
PB OUT AMP KILL SW
ACC DET
ACC
MAIN B.M
BURST UP
0.16Vp-p 5.06MHz
REC OUT AMP KILL SW
627KHz
627K 3.8M 4.8M (Hz)
4.43MHz BPF
4.43MHz
4MHz 4.43MHz
VIDEO IN
L806, L809, C815, C818, C819
627KHz L.P.F.
VCXO
APC PC
SUB BM
5.02MHz VCO
1/321
FREQ. DET
AFC COMP
KILL DET
1/8
ROTARY
DIGITAL M.M
MMV
PB AMP
REC CHROMA
RF CHROMA
X801
D802
R811
REG. 5V
Q803
H.SW PULSE
5Vp-p 25Hz
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03402F)
FROM AUDIO & SYSTEM CTL
EE Ⓗ
FROM INPUT SELECT
COLOUR Ⓛ
FROM SERVO
ROTARY SW
FROM LUMINANCE
Hss IN
HSS IN
H. SW
REC.Y
RF.Y
L3004 C3009
627KHz TRAP
3.8M 4.8M(Hz)
Q3004
FREQUENCY COMPENSATOR
C3010
C3019
L3005
VR3012
R3009
Q ADJ
TP3001 PLAY
RF SIGNAL 0.2Vp-p
TP3001
Q3005
AMP
BP3002-P502
REC-C
VR502
IC501 (AN3224K)
L502, L503, C502, C503
VR501
REC-Y
H.P.F.
MIX
CURR AMP
REC
P.B
P3001-P501
IC502 AN3311S
1ST & 2ND AMP
HEAD SW
H SW
CHROMA AMP
ENVE SELECT
PEAKING AMP
AGC AMP
AGC DET
PHASE COMPENSATOR
HEAD AMP OUTPUT
RF SIGNAL 120mVp-p
Q501

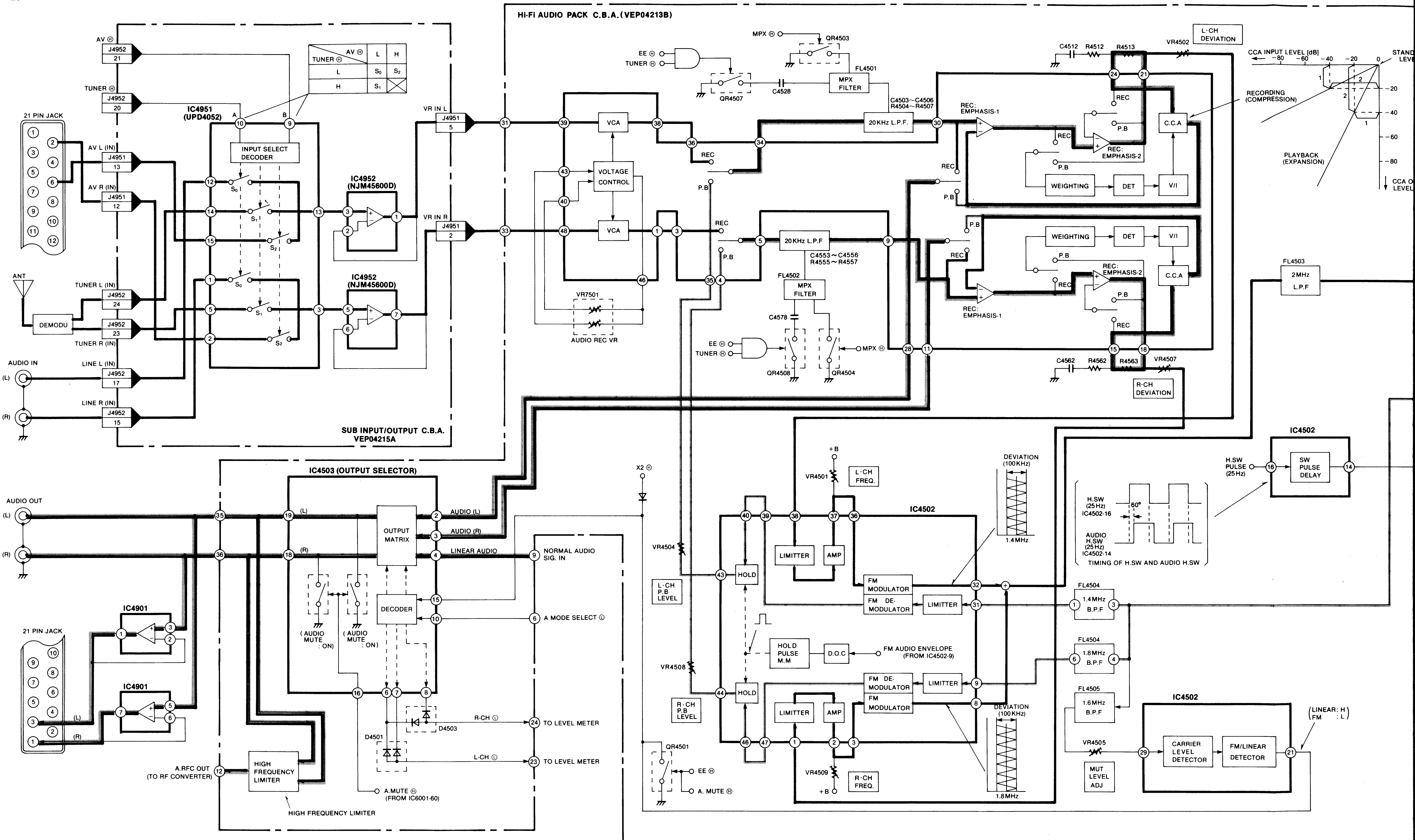
CE BLOCK DIAGRAM

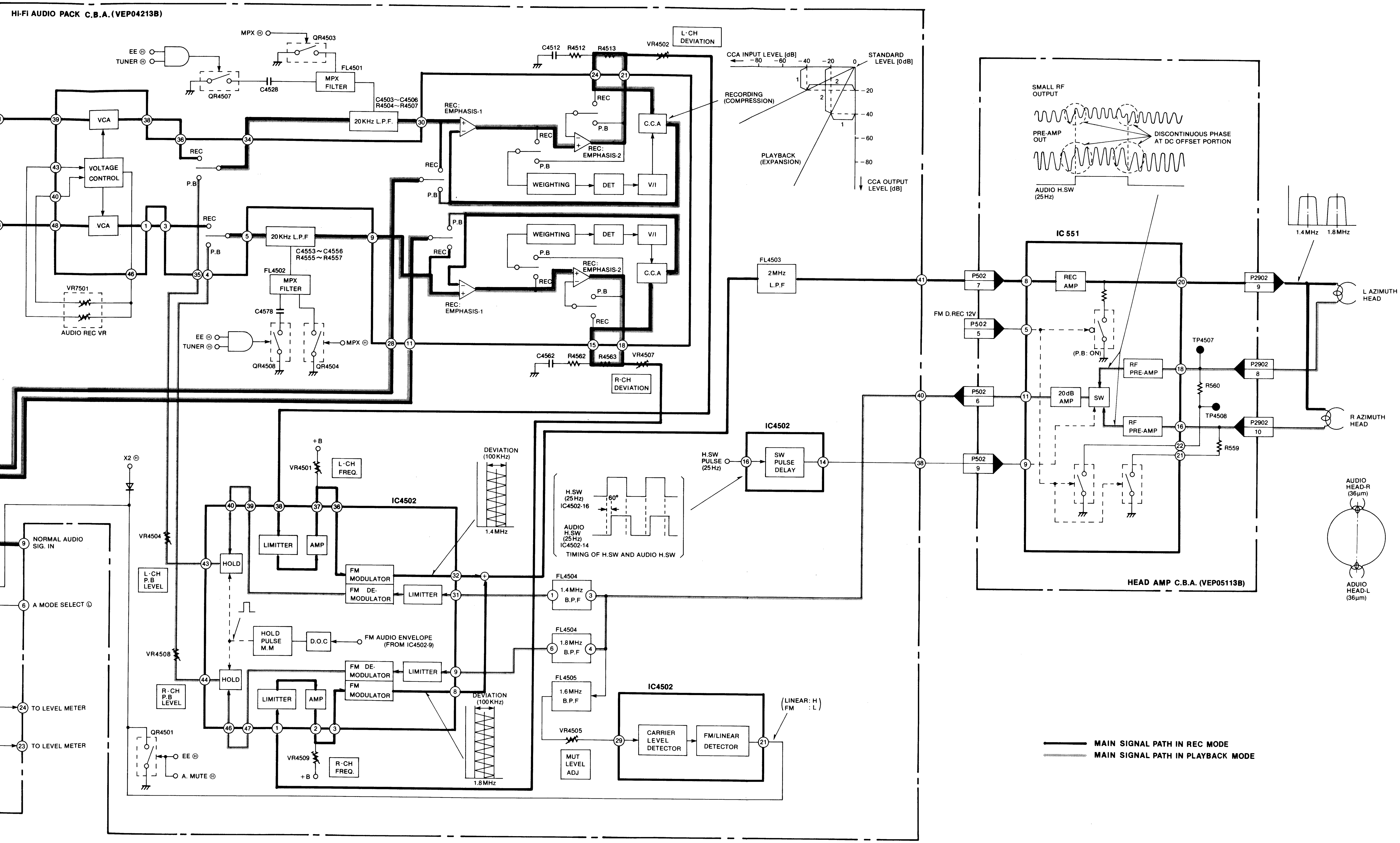

TO SERVO
Vss
TO COLOUR
Hss
FROM SERVO
ART V SYNC
IC301 (VEFH03A)
L.P.F.
AMP
FL302
L.P.F.
FM DEM
LIM
LIM
H.P.F.
L.P.F.
AGC
EE
EE
VV
CLP
MUTE
AMP
R312
C315
2MHz PEAK
L304
C349
R335
DOC PULSE GEN
ENV DET
MAIN EMPHASIS
100K 500K 2M
Hz
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
dB
4 4.43 MHz
VIDEO SIGNAL
C3902 (BA7004)
TEST SIG
500K OSC
X3901
FL301
L.P.F.
LUMINANCE SIGNAL
4MHz
AMP
EE
VV
AMP
DET
S-SEP
PULSE DELAY
NLE
MAIN EMPH
DEV
FM MOD
W/D CLIP
Q3001
AMP
VIDEO OUT
TP3002
CLAMP
LIM
DETAIL N.L.E.
NL DE
CLP
LIM
3901
A7348P)
MIX
PIC CONT
NC
L.P.F.
LIM
H.P.F.
(dB)
GAIN
4.0
3.0
2.0
1.0
0dB
-10dB
-20dB
-30dB
1 2 3 4 (MHz)
FREQUENCY
MHz
4.8
3.8
SYNC TIP
WHITE LEVEL
FM MODURATION
VR3004
REG 5V
PICTURE VR
NL EMPHASIS
-20dB
-10dB
-0dB
0.1 0.5 1 2 3 4 5
MHz
UT/OUTPUT SELECT PACK C.B.A.
P04214A)
EDIT SW
OFF
ON
REG 5V
EDIT LNC
LOGIC
EE-VV DETAIL
REG 6V
Q3003
(E-REC Ⓗ : ON)
QR3002
E-REC Ⓛ
FROM SYSTEM CTL
E-REC Ⓗ
ENVE SELECT
TO SERVO
HEAD AMP SW
FROM SERVO
HEAD SW
FROM SERVO
FL801
5.06MHz B.P.F.
VR803
PB CHROMA
FL801
1.6MHz L.P.F.
1.6MHz
IC801 (VEFH04A)
PB OUT AMP KILL SW
ACC DET
ACC
MAIN B.M
BURST UP
0.16Vp-p 5.06MHz
REC OUT AMP KILL SW
REC CHROMA
627KHz
627K 3.8M 4.8M Hz
PB AMP
RF CHROMA
H. SW
REC.Y
RF.Y
APC PC
5.02MHz VCO
1/321
AFC COMP
FREQ. DET
KILL DET
1/8
ROTARY
DIGITAL M.M
MMV
SUB BM
L3004
C3009
627KHz TRAP
3.8M 4.8MHz
Q3004
FREQUENCY COMPENSATOR
C3010
C3019
L3005
VR3012
R3009
Q ADJ
TP3001 PLAY
RF SIGNAL
0.2Vp-p
TP3001
D802
R811
REG. 5V
Q803
ACK C.B.A.
H.SW PULSE
5Vp-p 25Hz
Q3005
AMP
FROM LUMINANCE
Hss IN
HSS IN
BP3002-P502
REC-C
VR502
IC501 (AN3224K)
BP3002-P502
L502, L503, C502, C503
VR501
REC-Y
H.P.F
MIX
AMP
CURR AMP
REC
P.B
(REC: ON)
(REC: ON)
LOGIC
TP504
TP503
P3001-P501
P3001-P501
IC502
AN3311S
1ST & 2ND AMP
1ST & 2ND AMP
1ST & 2ND AMP
1ST & 2ND AMP
HEAD SW
H SW
HEAD SW
AGC DET
CHROMA AMP
PEAKING AMP
AGC AMP
ENVE SELECT
PHASE COMPENSATOR
HEAD AMP OUTPUT
RF SIGNAL
120mVp-p
627K 3.8M 4.8M Hz
AMP
Q501
HEAD AMP PACK C.B.A. (VEP05113B)
P2902
VIDEO HEAD L'
VIDEO HEAD R'
VIDEO HEAD R
VIDEO HEAD L
R (35μm)
620±5μm
L' (49μm)
R' (49μm)
L (35μm)

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE
5.06MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE

Next Page:
Hi-Fi AUDIO Section

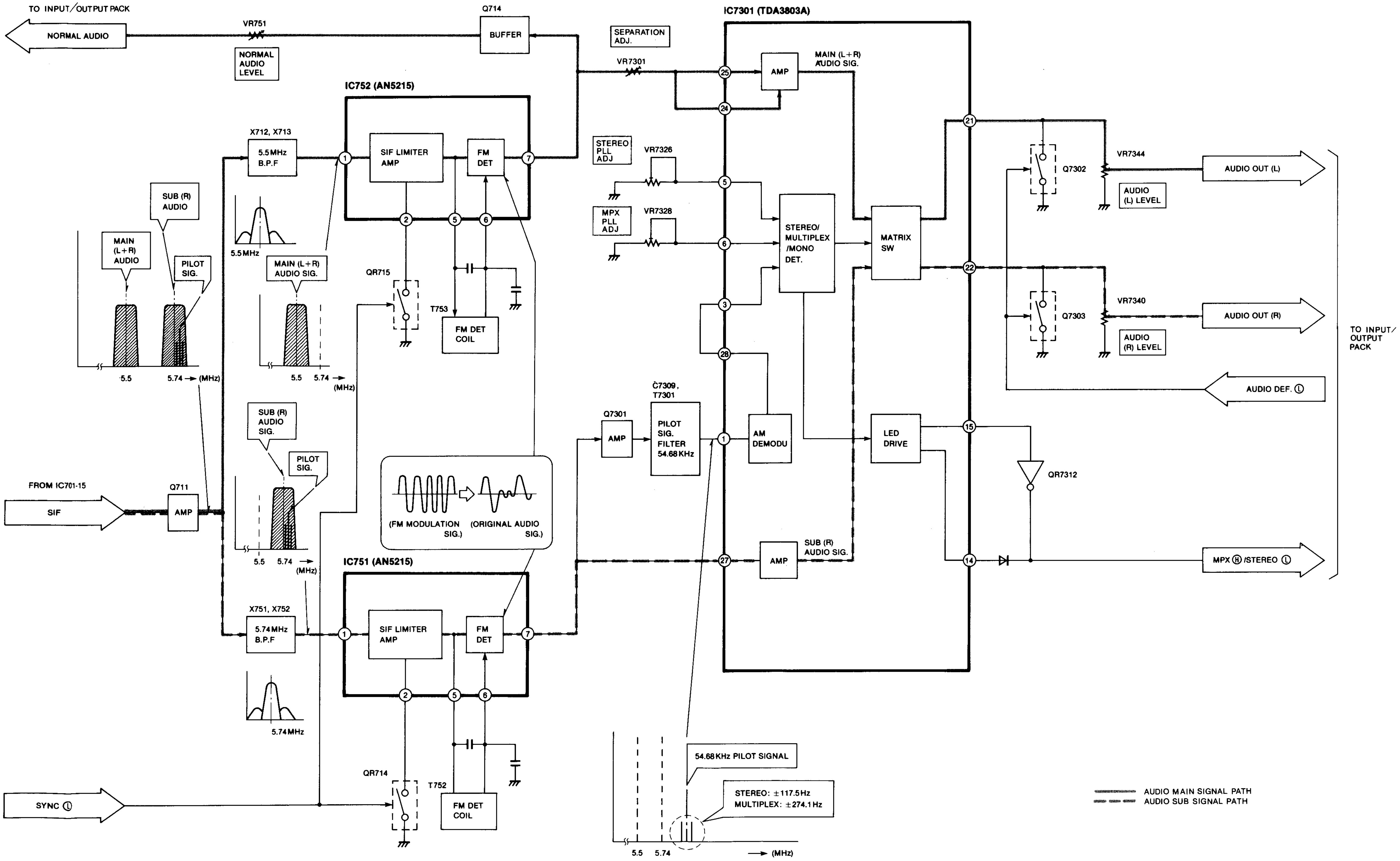
3-4. Hi-Fi AUDIO BLOCK DIAGRAM


Hi-Fi AUDIO PACK C.B.A.(VEP04213B)
SUB INPUT/OUTPUT C.B.A. VEP04215A
21 PIN JACK
ANT
DEMODU
AUDIO IN
(L)
(R)
AV Ⓗ
J4952 21
TUNER Ⓗ
J4952 20
AV L (IN)
J4951 13
AV R (IN)
J4951 12
TUNER L (IN)
J4952 24
J4952 23
TUNER R (IN)
LINE L (IN)
J4952 17
LINE R (IN)
J4952 15
IC4951 (UPD4052)
INPUT SELECT DECODER
AV Ⓗ
TUNER Ⓗ
L
H
S0
S2
S1
IC4952 (NJM45600D)
VR IN L
J4951 5
VR IN R
J4951 2
VCA
VOLTAGE CONTROL
VR7501
AUDIO REC VR
EE Ⓗ
TUNER Ⓗ
MPX Ⓗ
QR4503
QR4507
C4528
FL4501
MPX FILTER
C4503~C4506
R4504~R4507
20KHz L.P.F.
REC
P.B
20KHz L.P.F
C4553~C4556
R4555~R4557
FL4502
MPX FILTER
C4578
QR4508
QR4504
C4512
R4512
R4513
VR4502
L·CH DEVIATION
REC: EMPHASIS-1
REC: EMPHASIS-2
C.C.A
WEIGHTING
DET
V/I
C4562
R4562
R4563
VR4507
R·CH DEVIATION
CCA INPUT LEVEL [dB]
-80
-60
-40
-20
0
STAND LEVE
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
CCA O LEVEL
FL4503
2MHz L.P.F
AUDIO OUT
IC4901
IC4503 (OUTPUT SELECTOR)
OUTPUT MATRIX
DECODER
AUDIO (L)
AUDIO (R)
LINEAR AUDIO
NORMAL AUDIO SIG. IN
A MODE SELECT Ⓛ
(AUDIO MUTE : ON)
D4501
D4503
R-CH Ⓛ
L-CH Ⓛ
TO LEVEL METER
A.RFC OUT (TO RF CONVERTER)
HIGH FREQUENCY LIMITER
A.MUTE Ⓗ (FROM IC6001-60)
X2 Ⓗ
VR4504
L·CH P.B LEVEL
VR4508
R·CH P.B LEVEL
QR4501
EE Ⓗ
A. MUTE Ⓗ
+B
VR4501
L·CH FREQ.
VR4509
R·CH FREQ.
IC4502
HOLD
HOLD PULSE M.M
D.O.C
FM AUDIO ENVELOPE (FROM IC4502-9)
LIMITTER
AMP
FM MODULATOR
FM DE-MODULATOR
DEVIATION (100KHz)
1.4MHz
1.8MHz
H.SW (25Hz) IC4502-16
60°
AUDIO H.SW (25Hz) IC4502-14
TIMING OF H.SW AND AUDIO H.SW
H.SW PULSE (25Hz)
SW PULSE DELAY
FL4504
1.4MHz B.P.F
1.8MHz B.P.F
FL4505
1.6MHz B.P.F
VR4505
MUT LEVEL ADJ
CARRIER LEVEL DETECTOR
FM/LINEAR DETECTOR
(LINEAR: H FM : L)



Hi-Fi AUDIO PACK C.B.A. (VEP04213B)
MPX Ⓗ
EE Ⓗ
TUNER Ⓗ
QR4503
QR4507
C4528
FL4501
MPX FILTER
VCA
VOLTAGE CONTROL
VCA
REC
P.B
20KHz L.P.F.
C4503～C4506
R4504～R4507
REC: EMPHASIS-1
C4512
R4512
R4513
VR4502
L·CH DEVIATION
REC
P.B
REC: EMPHASIS-2
C.C.A
WEIGHTING
DET
V/I
CCA INPUT LEVEL [dB]
-80
-60
-40
-20
0
STANDARD LEVEL [0dB]
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
CCA OUTPUT LEVEL [dB]
20KHz L.P.F
C4553～C4556
R4555～R4557
FL4502
MPX FILTER
C4578
EE Ⓗ
TUNER Ⓗ
QR4508
QR4504
MPX Ⓗ
VR7501
AUDIO REC VR
REC: EMPHASIS-1
REC: EMPHASIS-2
C4562
R4562
R4563
VR4507
R·CH DEVIATION
FL4503
2MHz L.P.F
X2 Ⓗ
NORMAL AUDIO SIG. IN
A MODE SELECT Ⓛ
TO LEVEL METER
TO LEVEL METER
+B
VR4501
L·CH FREQ.
VR4504
L·CH P.B LEVEL
VR4508
R·CH P.B LEVEL
IC4502
LIMITTER
AMP
HOLD
FM MODULATOR
FM DE-MODULATOR
LIMITTER
HOLD PULSE M.M
D.O.C
FM AUDIO ENVELOPE (FROM IC4502-9)
HOLD
FM DE-MODULATOR
FM MODULATOR
LIMITTER
LIMITTER
AMP
DEVIATION (100KHz)
1.4MHz
DEVIATION (100KHz)
1.8MHz
QR4501
EE Ⓗ
A. MUTE Ⓗ
VR4509
+B
R·CH FREQ.
FL4504
1.4MHz B.P.F
FL4504
1.8MHz B.P.F
FL4505
1.6MHz B.P.F
VR4505
MUT LEVEL ADJ
IC4502
CARRIER LEVEL DETECTOR
FM/LINEAR DETECTOR
(LINEAR: H)
(FM : L)
H.SW (25Hz) IC4502-16
60°
AUDIO H.SW (25Hz) IC4502-14
TIMING OF H.SW AND AUDIO H.SW
H.SW PULSE (25Hz)
IC4502
SW PULSE DELAY
SMALL RF OUTPUT
PRE-AMP OUT
DISCONTINUOUS PHASE AT DC OFFSET PORTION
AUDIO H.SW (25Hz)
IC 551
P502
FM D.REC 12V
REC AMP
(P.B: ON)
RF PRE-AMP
20dB AMP
SW
RF PRE-AMP
TP4507
R560
TP4508
R559
P2902
1.4MHz
1.8MHz
L AZIMUTH HEAD
R AZIMUTH HEAD
AUDIO HEAD-R (36μm)
ADUIO HEAD-L (36μm)
HEAD AMP C.B.A. (VEP05113B)
MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE

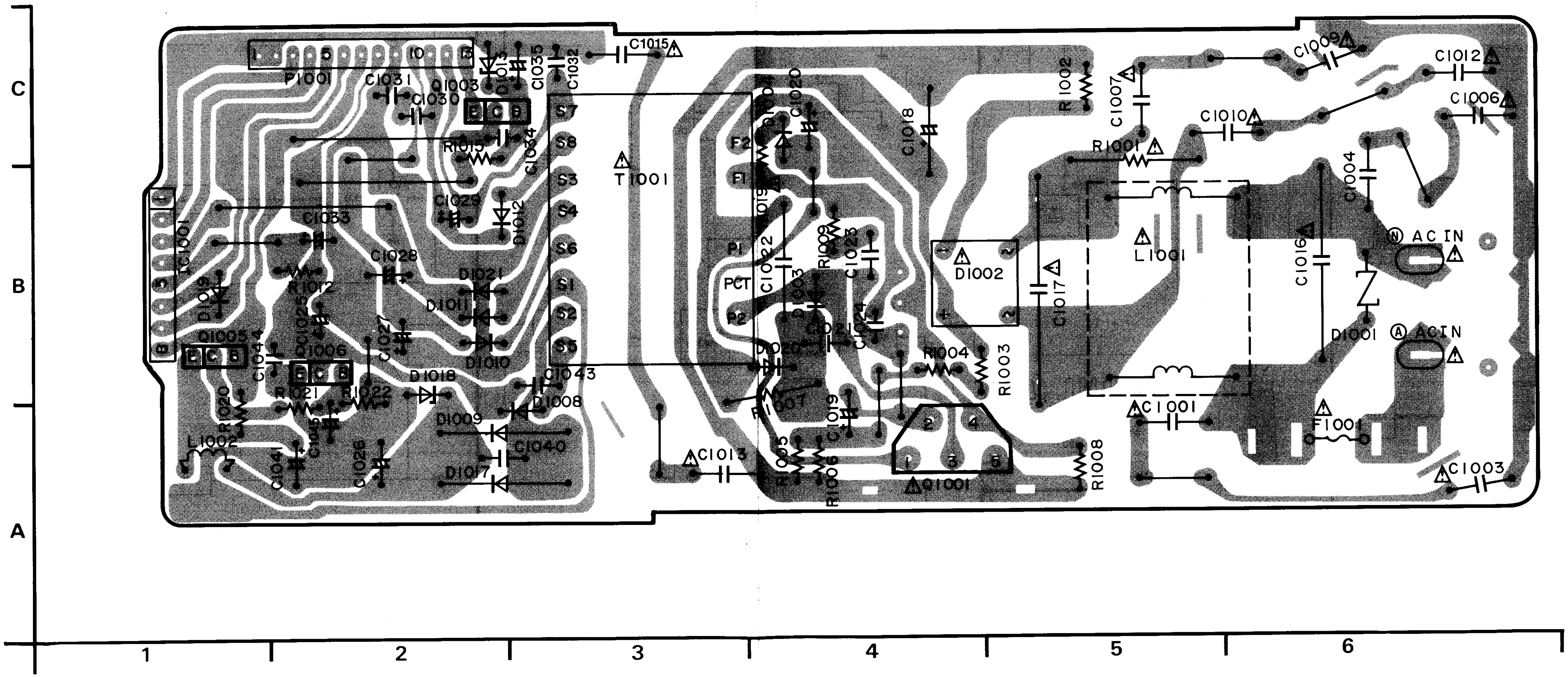
3-5. DECODER BLOCK DIAGRAM


TO INPUT/OUTPUT PACK
NORMAL AUDIO
VR751
NORMAL AUDIO LEVEL
Q714
BUFFER
SEPARATION ADJ.
VR7301
IC7301 (TDA3803A)
AMP
MAIN (L+R) AUDIO SIG.
IC752 (AN5215)
X712, X713
5.5MHz B.P.F
SIF LIMITER AMP
FM DET
5.5MHz
SUB (R) AUDIO
MAIN (L+R) AUDIO
PILOT SIG.
5.5
5.74 → (MHz)
MAIN (L+R) AUDIO SIG.
QR715
T753
FM DET COIL
5.5 5.74 → (MHz)
STEREO PLL ADJ
VR7326
MPX PLL ADJ
VR7328
STEREO/ MULTIPLEX /MONO DET.
MATRIX SW
Q7302
VR7344
AUDIO OUT (L)
AUDIO (L) LEVEL
Q7303
VR7340
AUDIO OUT (R)
AUDIO (R) LEVEL
TO INPUT/ OUTPUT PACK
AUDIO DEF. Ⓛ
C7309, T7301
Q7301
AMP
PILOT SIG. FILTER 54.68KHz
AM DEMODU
LED DRIVE
QR7312
SUB (R) AUDIO SIG.
PILOT SIG.
FROM IC701-15
SIF
Q711
AMP
(FM MODULATION SIG.)
(ORIGINAL AUDIO SIG.)
5.5 5.74 → (MHz)
IC751 (AN5215)
X751, X752
5.74MHz B.P.F
SIF LIMITER AMP
FM DET
5.74MHz
MPX Ⓗ /STEREO Ⓛ
QR714
T752
FM DET COIL
SYNC Ⓛ
54.68KHz PILOT SIGNAL
STEREO: ±117.5Hz
MULTIPLEX: ±274.1Hz
5.5 5.74 → (MHz)
AUDIO MAIN SIGNAL PATH
AUDIO SUB SIGNAL PATH
1
2
5
6
7
25
24
21
22
3
28
14
15
27

3-6. POWER C.B.A. (VEP01299A)

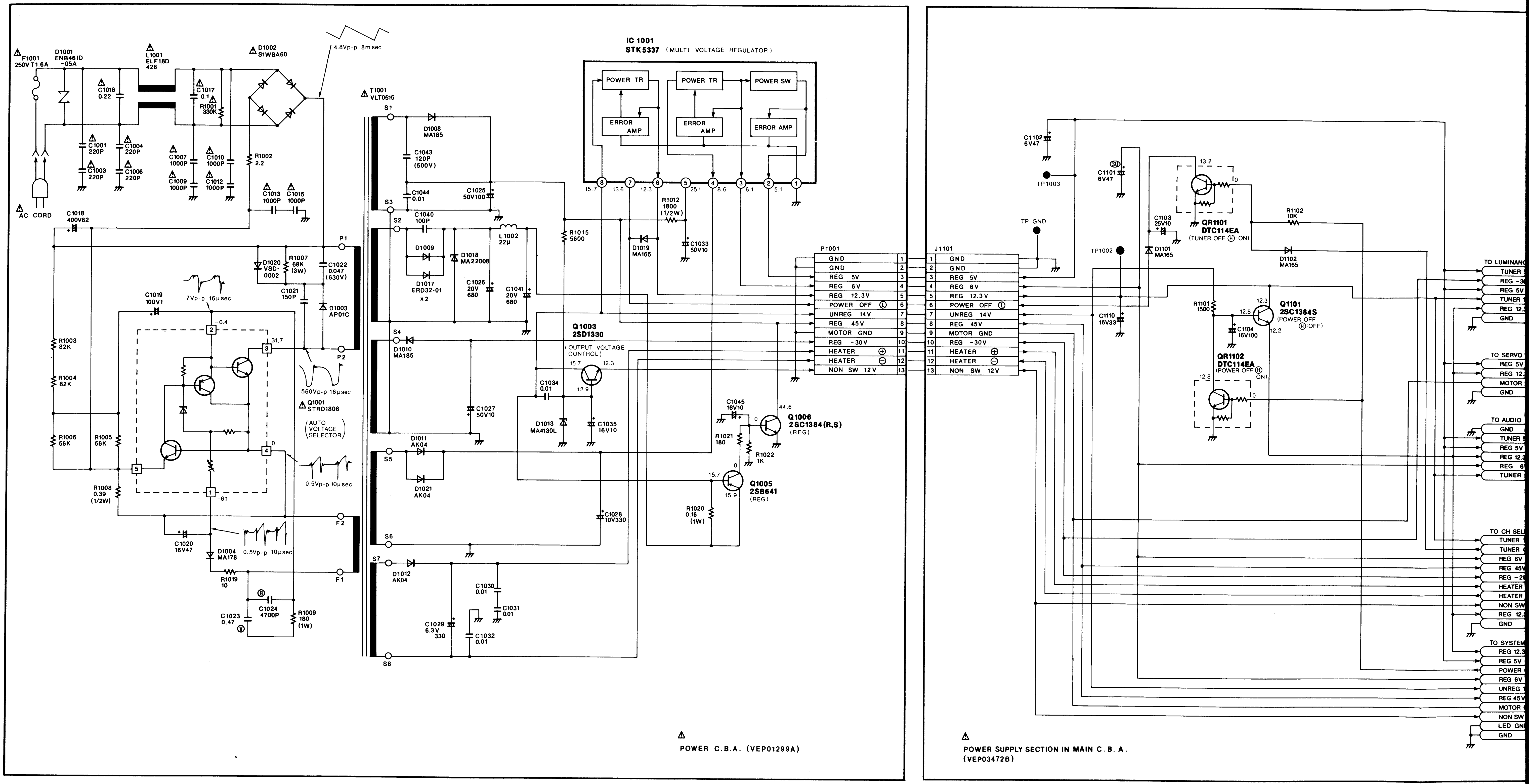
POWER C.B.A.	
Transistor	
Q1001 Q1003 Q1005 Q1006	A-4 C-2 B-1 B-2
Integrated Circuit	
IC1001	B-1
Connector	
P1001	C-2

ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
P1001
C1031
Q1003
C1030
E C B
D1013
C1035
C1032
C1015
R1015
C1034
S7
S8
S3
S4
S6
S1
S2
S5
T1001
C1029
D1012
C1033
IC1001
C1028
R1012
D1021
D1011
C1025
C1027
D1010
D1019
Q1005
Q1006
C1044
D1018
C1043
R1020
R1021
R1022
D1008
D1009
C1040
L1002
C1041
C1042
C1026
D1017
C1013
F2
F1
P1
PCT
P2
D1014
C1020
C1019
C1022
C1023
R1009
D1003
C1021
C1024
D1020
R1007
R1005
R1006
C1018
R1002
C1007
R1001
C1010
D1002
C1017
R1004
R1003
Q1001
R1008
L1001
C1001
F1001
C1009
C1012
C1006
C1004
C1016
D1001
N AC IN
A AC IN
C1003

Back Page:
DECODER Section

3-7. POWER SCHEMATIC DIAGRAM



F1001 250V T1.6A
D1001 ENB461D -05A
L1001 ELF18D 428
D1002 S1WBA60
4.8Vp-p 8msec
C1016 0.22
C1017 0.1
R1001 330K
C1001 220P
C1004 220P
C1003 220P
C1006 220P
C1007 1000P
C1010 1000P
C1009 1000P
C1012 1000P
R1002 2.2
C1013 1000P
C1015 1000P
AC CORD
C1018 400V82
D1020 VSD-0002
R1007 68K (3W)
C1022 0.047 (630V)
C1021 150P
D1003 AP01C
P1
P2
C1019 100V1
7Vp-p 16μsec
R1003 82K
R1004 82K
R1006 56K
R1005 56K
R1008 0.39 (1/2W)
560Vp-p 16μsec
Q1001 STRD1806
(AUTO VOLTAGE SELECTOR)
0.5Vp-p 10μsec
C1020 16V47
D1004 MA178
R1019 10
C1023 0.47
C1024 4700P
R1009 180 (1W)
F1
F2
T1001 VLT0515
S1 S2 S3 S4 S5 S6 S7 S8
D1008 MA185
C1043 120P (500V)
C1044 0.01
C1025 50V100
C1040 100P
D1009
D1018 MA22008
D1017 ERD32-01 x2
L1002 22μ
C1026 20V 680
C1041 20V 680
D1010 MA185
C1027 50V10
D1011 AK04
D1021 AK04
D1012 AK04
C1030 0.01
C1031 0.01
C1029 6.3V 330
C1032 0.01
IC 1001 STK5337 (MULTI VOLTAGE REGULATOR)
POWER TR
POWER TR
POWER SW
ERROR AMP
ERROR AMP
ERROR AMP
R1015 5600
D1019 MA165
R1012 1800 (1/2W)
C1033 50V10
Q1003 2SD1330 (OUTPUT VOLTAGE CONTROL)
C1034 0.01
D1013 MA4130L
C1035 16V10
C1028 10V330
C1045 16V10
Q1006 2SC1384(R,S) (REG)
R1021 180
R1022 1K
Q1005 2SB641 (REG)
R1020 0.16 (1W)
P1001
1 GND
2 GND
3 REG 5V
4 REG 6V
5 REG 12.3V
6 POWER OFF Ⓛ
7 UNREG 14V
8 REG 45V
9 MOTOR GND
10 REG -30V
11 HEATER ⊕
12 HEATER ⊖
13 NON SW 12V
J1101
C1102 6V47
TP1003
C1101 6V47
TP GND
TP1002
C1103 25V10
D1101 MA165
QR1101 DTC114EA (TUNER OFF Ⓗ:ON)
R1102 10K
D1102 MA165
C1110 16V33
R1101 1500
Q1101 2SC1384S (POWER OFF Ⓗ:OFF)
C1104 16V100
QR1102 DTC114EA (POWER OFF Ⓗ:ON)
TO LUMINANC
TUNER
REG -3
REG 5V
TUNER
REG 12.
GND
TO SERVO
REG 5V
REG 12.
MOTOR
GND
TO AUDIO
GND
TUNER
REG 5V
REG 12.
REG 6
TUNER
TO CH SEL
TUNER
TUNER
REG 6V
REG 45V
REG -2
HEATER
HEATER
NON SW
REG 12.
GND
TO SYSTEM
REG 12.3
REG 5V
POWER
REG 6V
UNREG
REG 45V
MOTOR
NON SW
LED GN
GND
POWER C.B.A. (VEP01299A)
POWER SUPPLY SECTION IN MAIN C.B.A. (VEP03472B)
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

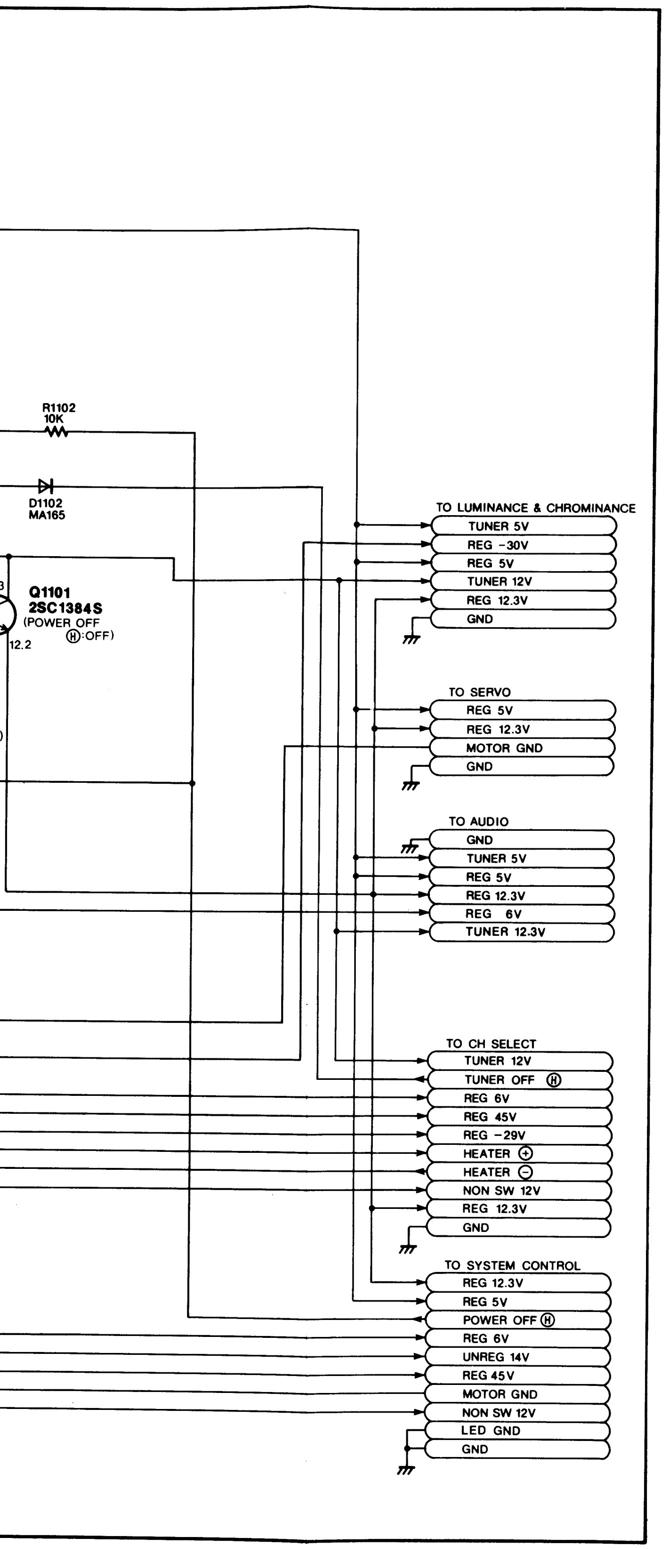
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE ..... Q1001-(5)
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

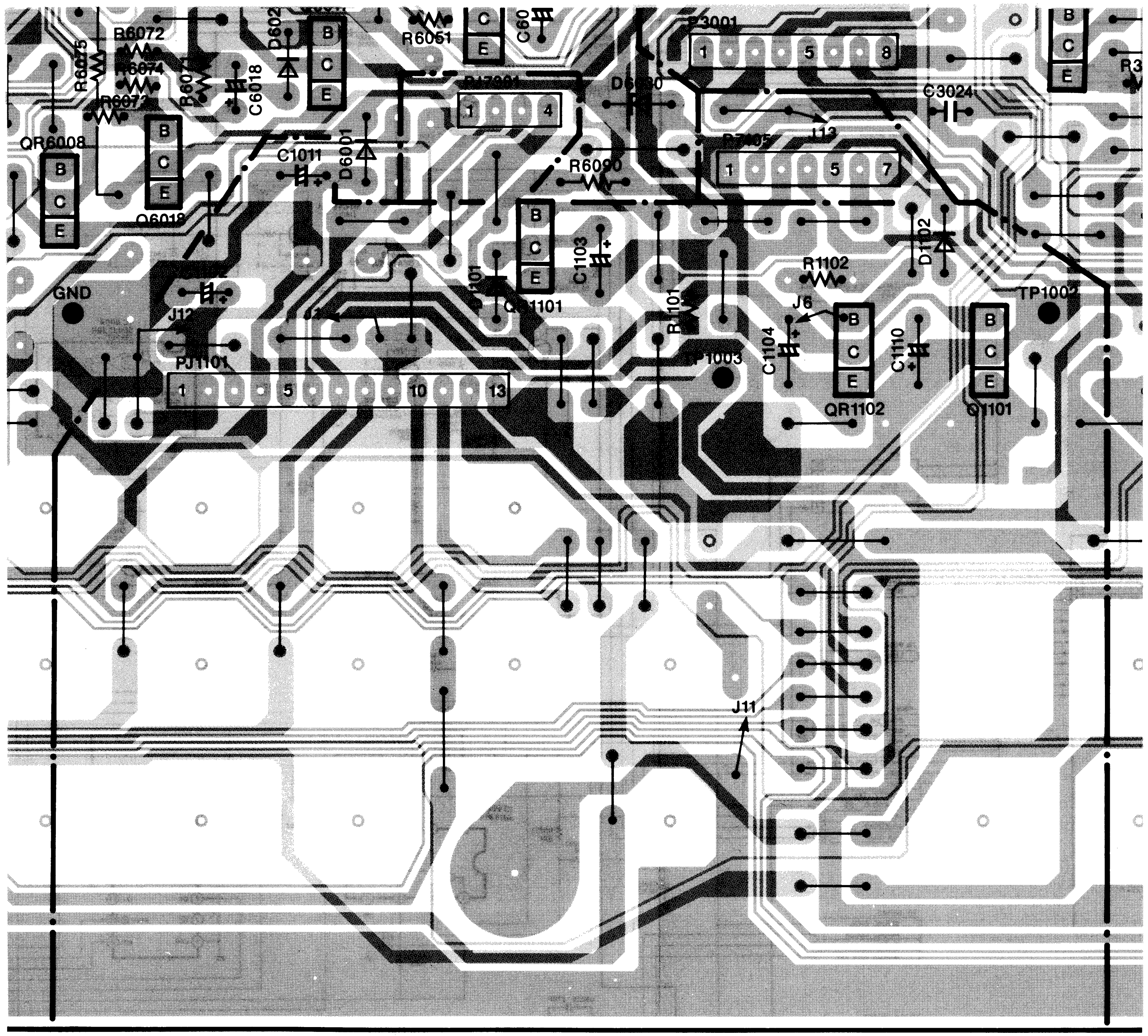
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 220V.

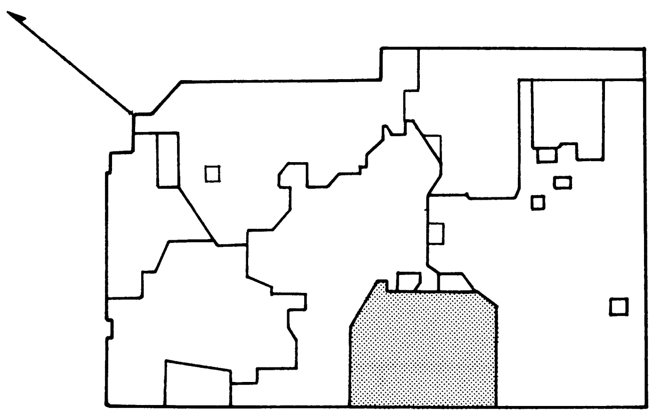

R1102
10K
D1102
MA165
Q1101
2SC1384S
(POWER OFF
Ⓗ:OFF)
12.2
TO LUMINANCE & CHROMINANCE
TUNER 5V
REG -30V
REG 5V
TUNER 12V
REG 12.3V
GND
TO SERVO
REG 5V
REG 12.3V
MOTOR GND
GND
TO AUDIO
GND
TUNER 5V
REG 5V
REG 12.3V
REG 6V
TUNER 12.3V
TO CH SELECT
TUNER 12V
TUNER OFF Ⓗ
REG 6V
REG 45V
REG -29V
HEATER ⊕
HEATER ⊖
NON SW 12V
REG 12.3V
GND
TO SYSTEM CONTROL
REG 12.3V
REG 5V
POWER OFF Ⓗ
REG 6V
UNREG 14V
REG 45V
MOTOR GND
NON SW 12V
LED GND
GND

OLTAGE OR WAVEFORM ON THE POWER TRANSFORMER
TERMINAL OF MEASURING POINT AS FOLLOWS.
Q1001-(5)
TP GND OF MAIN C.B.A.
ATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN

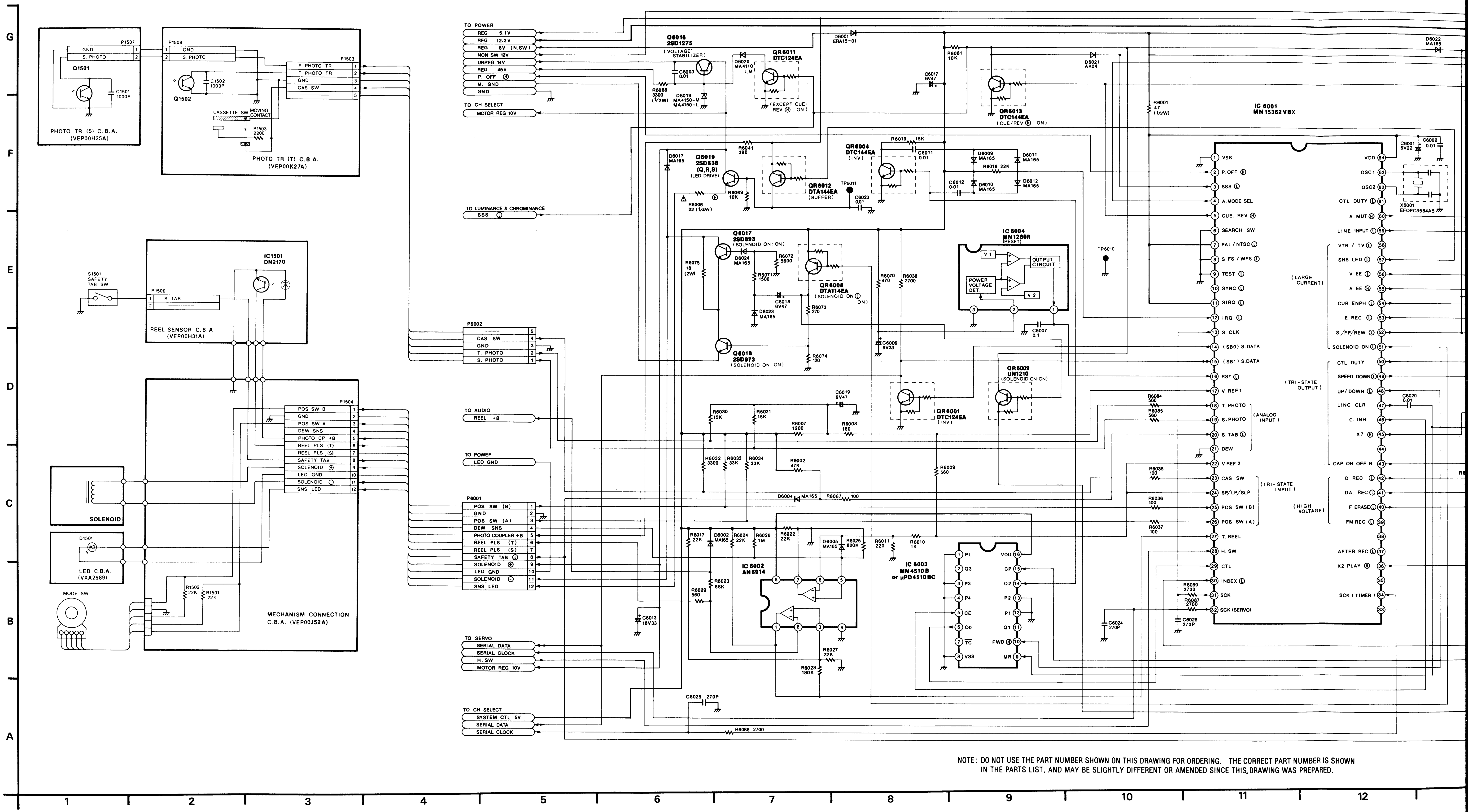
10
11

3-8. POWER SUPPLY Section In Main C.B.A. (VEP03472B)


R6075
B6072
R6074
R6073
R607
C6018
D602
B
C
E
R6051
C60
P3001
1
5
8
R17001
1
4
D6030
C3024
L13
R3
QR6008
Q6018
C1011
D6001
R6090
P3105
1
5
7
C1103
Q1101
R1102
D1102
TP1002
GND
J12
PJ1101
1
5
10
13
R1101
TP1003
C1104
J6
QR1102
C1110
Q1101
J11



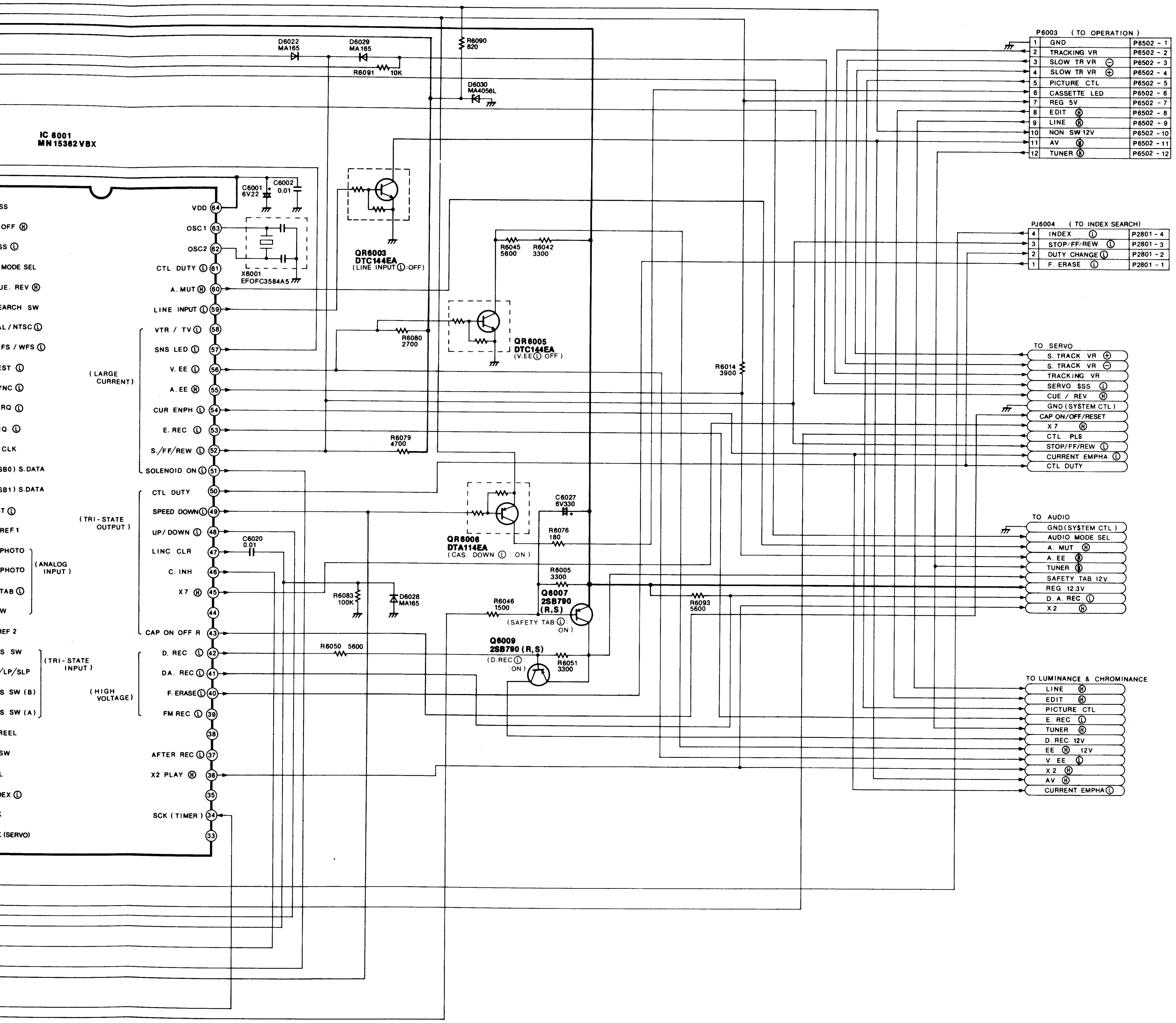
3-9. SYSTEM CONTROL SCHEMATIC DIAGRAM



G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
P1507
GND
S PHOTO
Q1501
C1501 1000P
PHOTO TR (S) C.B.A. (VEP00H35A)
P1508
Q1502
C1502 1000P
P1503
P PHOTO TR
T PHOTO TR
GND
CAS SW
CASSETTE SW
MOVING CONTACT
R1503 2200
PHOTO TR (T) C.B.A. (VEP00K27A)
S1501 SAFETY TAB SW
P1506
S TAB
IC1501 DN2170
REEL SENSOR C.B.A. (VEP00H31A)
P1504
POS SW B
POS SW A
DEW SNS
PHOTO CP +B
REEL PLS (T)
REEL PLS (S)
SAFETY TAB
SOLENOID ⊕
LED GND
SOLENOID ⊖
SNS LED
SOLENOID
D1501
LED C.B.A. (VXA2689)
MODE SW
R1502 22K
R1501 22K
MECHANISM CONNECTION C.B.A. (VEP00J52A)
TO POWER
REG 5.1V
REG 12.3V
REG 6V (N.SW)
NON SW 12V
UNREG 14V
REG 45V
P. OFF Ⓗ
M. GND
GND
TO CH SELECT
MOTOR REG 10V
TO LUMINANCE & CHROMINANCE
SSS Ⓛ
P6002
CAS SW
GND
T. PHOTO
S. PHOTO
TO AUDIO
REEL +B
TO POWER
LED GND
P6001
POS SW (B)
GND
POS SW (A)
DEW SNS
PHOTO COUPLER +B
REEL PLS (T)
REEL PLS (S)
SAFETY TAB Ⓛ
SOLENOID ⊕
LED GND
SOLENOID ⊖
SNS LED
TO SERVO
SERIAL DATA
SERIAL CLOCK
H. SW
MOTOR REG 10V
TO CH SELECT
SYSTEM CTL 5V
SERIAL DATA
SERIAL CLOCK
Q6016 2SD1275 (VOLTAGE STABILIZER)
C6003 0.01
R6068 3300 (1/2W)
D6019 MA4150-M MA4150-L
D6020 MA4110 L,M
QR6011 DTC124EA
(EXCEPT CUE/REV Ⓗ : ON)
D6001 ERA15-01
R6081 10K
C6017 6V47
D6021 AK04
QR6013 DTC144EA (CUE/REV Ⓗ : ON)
R6001 47 (1/2W)
D6022 MA165
D6017 MA165
R6041 390
Q6019 2SD638 (Q,R,S) (LED DRIVE)
R6069 10K
R6006 22 (1/4W)
QR6012 DTA144EA (BUFFER)
TP6011
C6023 0.01
QR6004 DTC144EA (INV)
R6019 15K
C6011 0.01
D6009 MA165
R6018 22K
D6011 MA165
C6012 0.01
D6010 MA165
D6012 MA165
Q6017 2SD893 (SOLENOID ON : ON)
D6024 MA165
R6072 5600
R6075 18 (2W)
R6071 1500
C6018 6V47
D6023 MA165
QR6008 DTA114EA (SOLENOID ON Ⓛ : ON)
R6073 270
R6070 470
R6038 2700
C6006 6V33
Q6018 2SD973 (SOLENOID ON : ON)
R6074 120
IC 6004 MN1280R (RESET)
V 1
V 2
OUTPUT CIRCUIT
POWER VOLTAGE DET.
C6007 0.1
TP6010
QR6009 UN1210 (SOLENOID ON : ON)
QR6001 DTC124EA (INV)
C6019 6V47
R6030 15K
R6031 15K
R6007 1200
R6008 180
R6032 3300
R6033 33K
R6034 33K
R6002 47K
R6009 560
D6004 MA165
R6067 100
R6017 22K
D6002 MA165
R6024 22K
R6026 1M
R6022 22K
D6005 MA165
R6025 820K
R6011 220
R6010 1K
R6023 68K
R6029 560
IC 6002 AN6914
R6027 22K
R6028 180K
C6013 16V33
IC 6003 MN4510B or μPD4510BC
PL
Q3
P3
P4
CE
Q0
TC
VSS
VDD
CP
Q2
P2
Q1
FWD
MR
C6024 270P
C6025 270P
R6088 2700
IC 6001 MN15362VBX
VSS
P. OFF Ⓗ
SSS Ⓛ
A. MODE SEL
CUE. REV Ⓗ
SEARCH SW
PAL / NTSC Ⓛ
S. FS / WFS Ⓛ
TEST Ⓛ
SYNC Ⓛ
SIRQ Ⓛ
IRQ Ⓛ
S. CLK
(SB0) S. DATA
(SB1) S. DATA
RST Ⓛ
V. REF 1
T. PHOTO
S. PHOTO
S. TAB Ⓛ
DEW
V REF 2
CAS SW
SP/LP/SLP
POS SW (B)
POS SW (A)
T. REEL
H. SW
CTL
INDEX Ⓛ
SCK
SCK (SERVO)
(ANALOG INPUT)
(TRI - STATE INPUT)
R6084 560
R6085 560
R6035 100
R6036 100
R6037 100
R6089 2700
R6087 2700
C6026 270P
VDD
OSC 1
OSC 2
CTL DUTY Ⓛ
A. MUT Ⓗ
LINE INPUT Ⓛ
VTR / TV Ⓛ
SNS LED Ⓛ
V. EE Ⓛ
A. EE Ⓗ
CUR ENPH Ⓛ
E. REC Ⓛ
S/FF/REW Ⓛ
SOLENOID ON Ⓛ
CTL DUTY
SPEED DOWN Ⓛ
UP/ DOWN Ⓛ
LINC CLR
C. INH
X7 Ⓗ
CAP ON OFF R
D. REC Ⓛ
DA. REC Ⓛ
F. ERASE Ⓛ
FM REC Ⓛ
AFTER REC Ⓛ
X2 PLAY Ⓗ
SCK (TIMER)
(LARGE CURRENT)
(TRI - STATE OUTPUT)
(HIGH VOLTAGE)
C6001 6V22
C6002 0.01
X6001 EFOFC3584A5
C6020 0.01

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Back Page:
POWER Section


IC 6001
MN15362VBX
VDD 64
OSC1 63
OSC2 62
CTL DUTY 61
A. MUT Ⓗ 60
LINE INPUT Ⓛ 59
VTR / TV Ⓛ 58
SNS LED Ⓛ 57
V. EE Ⓛ 56
A. EE Ⓗ 55
CUR ENPH Ⓛ 54
E. REC Ⓛ 53
S./FF/REW Ⓛ 52
SOLENOID ON Ⓛ 51
CTL DUTY 50
SPEED DOWN Ⓛ 49
UP/DOWN Ⓛ 48
LINC CLR 47
C. INH 46
X7 Ⓗ 45
44
CAP ON OFF R 43
D. REC Ⓛ 42
DA. REC Ⓛ 41
F. ERASE Ⓛ 40
FM REC Ⓛ 39
38
AFTER REC Ⓛ 37
X2 PLAY Ⓗ 36
35
SCK (TIMER) 34
33
(LARGE CURRENT)
(TRI-STATE OUTPUT)
(ANALOG INPUT)
(TRI-STATE INPUT)
(HIGH VOLTAGE)
C6001 6V22
C6002 0.01
X6001 EFOFC3584A5
D6022 MA165
D6029 MA165
R6091 10K
R6090 820
D6030 MA4056L
QR6003 DTC144EA (LINE INPUT Ⓛ:OFF)
R6045 5600
R6042 3300
R6080 2700
QR6005 DTC144EA (V.EE Ⓛ OFF)
R6014 3900
R6079 4700
QR6006 DTA114EA (CAS. DOWN Ⓛ : ON)
C6027 6V330
R6076 180
R6005 3300
C6020 0.01
R6083 100K
D6028 MA165
R6046 1500
Q6007 2SB790 (R,S) (SAFETY TAB Ⓛ ON)
R6093 5600
R6050 5600
Q6009 2SB790 (R,S) (D.REC Ⓛ :ON)
R6051 3300
P6003 (TO OPERATION)
1 GND P6502 - 1
2 TRACKING VR P6502 - 2
3 SLOW TR VR ⊖ P6502 - 3
4 SLOW TR VR ⊕ P6502 - 4
5 PICTURE CTL P6502 - 5
6 CASSETTE LED P6502 - 6
7 REG 5V P6502 - 7
8 EDIT Ⓗ P6502 - 8
9 LINE Ⓗ P6502 - 9
10 NON SW 12V P6502 - 10
11 AV Ⓗ P6502 - 11
12 TUNER Ⓗ P6502 - 12
PJ6004 (TO INDEX SEARCH)
4 INDEX Ⓛ P2801 - 4
3 STOP/FF/REW Ⓛ P2801 - 3
2 DUTY CHANGE Ⓛ P2801 - 2
1 F. ERASE Ⓛ P2801 - 1
TO SERVO
S. TRACK VR ⊕
S. TRACK VR ⊖
TRACKING VR
SERVO SSS Ⓛ
CUE / REV Ⓗ
GND (SYSTEM CTL)
CAP ON/OFF/RESET
X 7 Ⓗ
CTL PLS
STOP/FF/REW Ⓛ
CURRENT EMPHA Ⓛ
CTL DUTY
TO AUDIO
GND (SYSTEM CTL)
AUDIO MODE SEL
A. MUT Ⓗ
A. EE Ⓗ
TUNER Ⓗ
SAFETY TAB 12V
REG 12.3V
D. A. REC Ⓛ
X 2 Ⓗ
TO LUMINANCE & CHROMINANCE
LINE Ⓗ
EDIT Ⓗ
PICTURE CTL
E. REC Ⓛ
TUNER Ⓗ
D. REC 12V
EE Ⓗ 12V
V. EE Ⓛ
X 2 Ⓗ
AV Ⓗ
CURRENT EMPHA Ⓛ

THE CORRECT PART NUMBER IS SHOWN
THIS, DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

11 12 13 14 15 16 17 18

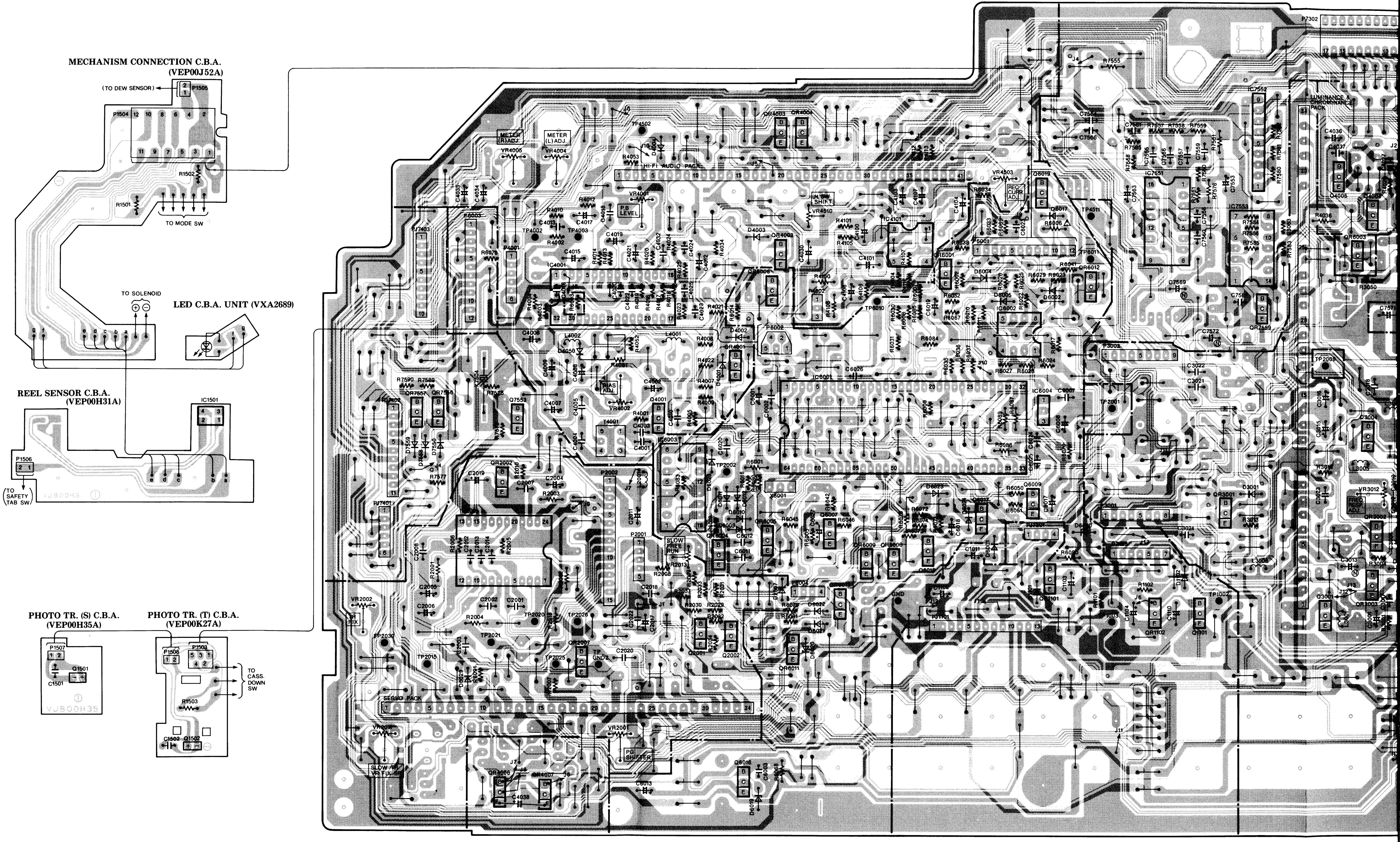
SYSTEM CONTROL ICs DC VOLTAGE CHART

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0.1	0	0	0	5.2	0	5.2	4.2	5.2	5.3	4.8	0.3	5.0	5.4	3.0	3.3	3.3	0.5
PLAY	0	0	5.2	0	0	0	5.3	0	5.3	4.2	5.3	5.3	4.9	0.3	5.0	5.4	3.0	3.3	3.3	0.5
REC	0	0	5.2	0	0	0	5.3	0	5.3	4.2	5.3	5.3	4.9	0.3	5.1	5.4	3.0	3.3	3.3	0.5
F.F	0	0	5.1	0	0	0	5.2	0	5.2	4.2	5.2	5.2	4.8	0.3	5.1	5.4	3.0	3.3	3.3	0.5
REW	0	0	5.1	0	0	0	5.2	0	5.2	4.2	5.2	5.2	4.8	0.3	5.1	5.4	3.0	3.3	3.3	0.5
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	2.1	2.1	2.1	2.1	5.4	0	0	0	5.1	4.8	5.2	5.0	4.8	2.5	0	5.2	5.2	0.1	4.8
PLAY	0	2.1	2.1	2.0	5.4	0	2.2	2.5	2.7	0.4	4.8	5.2	5.1	4.9	2.6	0	5.3	5.3	0.1	4.8
REC	0	2.7	2.1	2.1	5.4	0	2.2	2.5	2.7	0.4	4.8	5.2	5.1	4.9	2.7	0.1	5.3	5.3	0.1	0.1
F.F	0	2.1	2.1	2.1	2.1	5.4	2.7	0	2.7	5.1	4.8	5.2	5.0	4.8	2.6	0	5.2	5.2	0.4	4.8
REW	0	2.1	2.1	2.1	2.1	5.4	2.7	0	2.7	5.1	4.8	5.2	5.0	4.8	2.5	0	5.2	5.2	0.3	4.8
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	7.7	12.2	1.9	0	0.1	5.2	5.2	5.2	0.1	5.2	5.4	0.1	0	0	4.8	0.2	4.4	0	5.2	0
PLAY	7.7	12.2	5.3	0	0.1	0	5.3	5.3	0.1	5.3	5.4	4.2	0	4.8	0.1	5.1	4.4	0.3	5.2	0
REC	0.4	0.3	5.3	0.1	0.1	0.1	5.3	5.3	0.2	5.3	5.4	4.2	3.7	4.8	4.8	0.2	4.4	0	5.2	0
F.F	7.7	12.2	5.2	0	0.1	0	5.2	5.2	0.1	5.2	5.4	0.1	0	0	4.8	0.2	4.4	0	5.2	0
REW	7.7	12.2	5.2	0	0.1	0	5.2	0	0.1	5.2	5.4	0.1	0	0	4.8	0.2	4.4	0	5.2	0
REF. NO.	IC6001										IC6002									
MODE	61	62	63	64							1	2	3	4	5	6	7	8		
STOP	5.2	2.2	2.3	5.2							0	4.1	2.6	0	0	0.4	0	5.4		
PLAY	5.3	2.2	2.4	5.3							2.2	2.2	2.7	0	0	0.4	0	5.4		
REC	5.3	2.2	2.4	5.3							2.2	2.2	2.7	0	0	0.4	0	5.4		
F.F	5.2	2.2	2.3	5.2							2.7	2.1	2.7	0	0	0.4	0	5.4		
REW	5.2	2.2	2.3	5.2							2.7	2.1	2.7	0	0	0.4	0	5.4		
REF. NO.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	0	0	0	5.2	0	5.4	0	0	5.2	0	0	0	0	0.7	5.4				
PLAY	0	1.0	0	0	0	2.7	4.7	0	0	5.3	2.2	0	0	2.2	0.4	5.4				
REC	0	1.5	0	0	0.1	2.7	4.7	0	0	5.3	2.2	0	0	2.2	3.1	5.4				
F.F	0	1.1	0	0	0	2.7	4.9	0	0	5.2	2.2	0	0	2.1	1.0	5.4				
REW	0	1.1	0	0	0	2.7	4.9	0	0	0	2.2	0	0	2.1	0.9	5.4				
REF. NO.	IC6004																			
MODE	1	2	3																	
STOP	5.4	5.4	0																	
PLAY	5.4	5.4	0																	
REC	5.4	5.4	0																	
F.F	5.4	5.4	0																	
REW	5.4	5.4	0																	

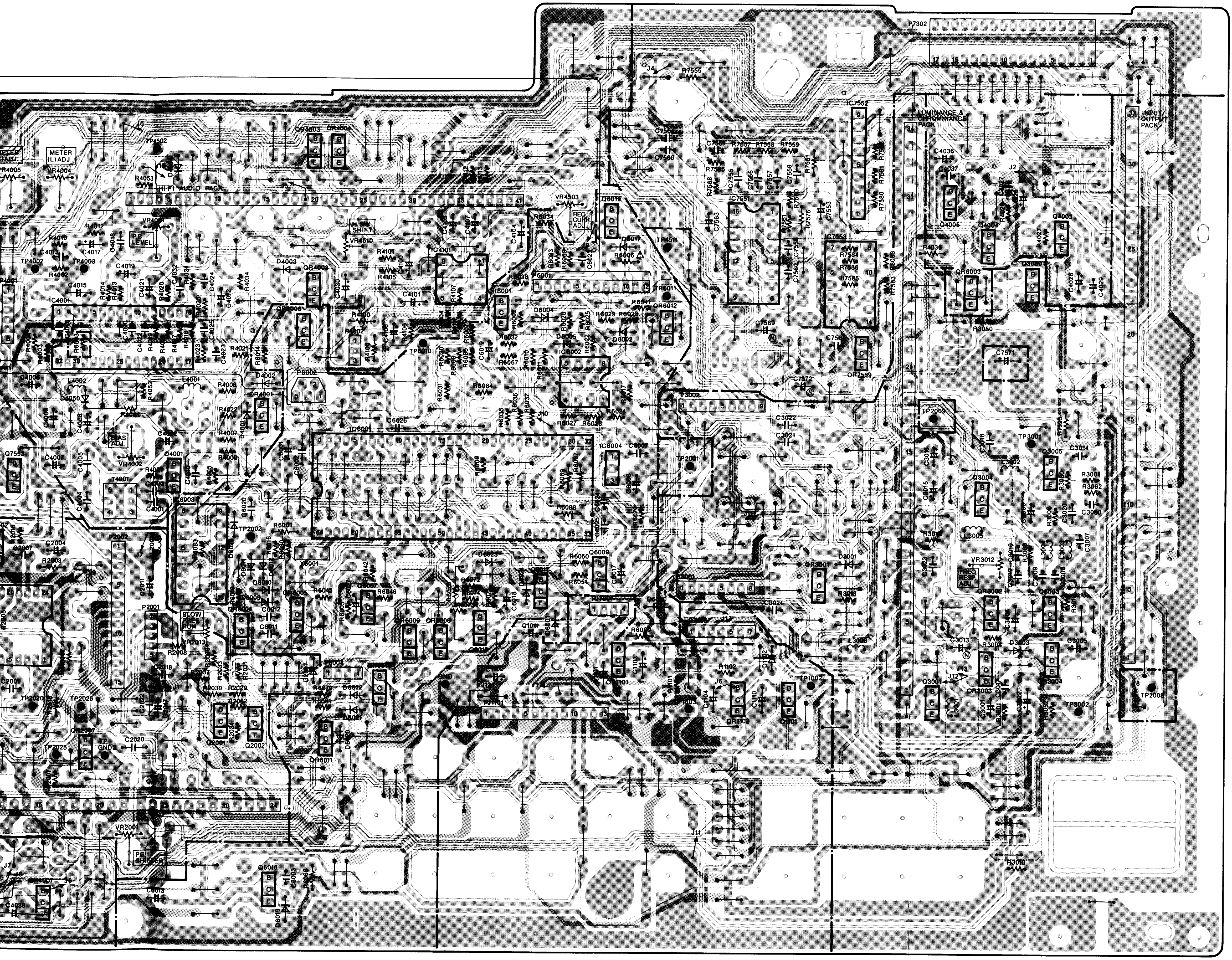
SYSTEM CONTROL TRANSISTORs DC VOLTAGE CHART

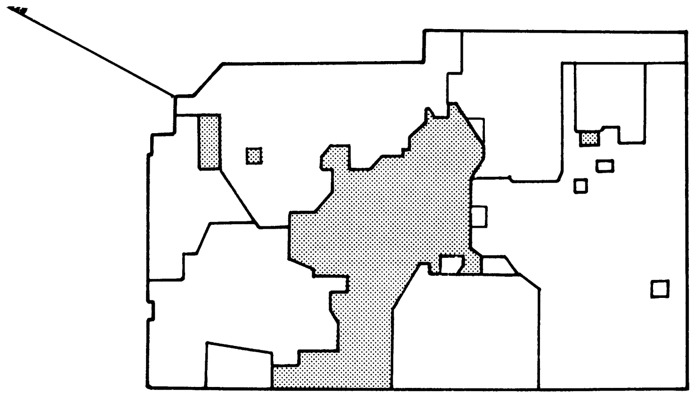
REF. NO.	Q6007			Q6009			Q6016			Q6017			Q6018			Q6019		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	12.2	12.2	11.5	12.2	−0.2	12.2	14.4	15.8	15.6	14.4	14.4	5.9	0	14.4	0	0.7	14.4	0.6
PLAY	12.2	12.2	11.5	12.2	0.2	12.2	10.5	15.6	11.7	10.5	10.5	2.0	0	10.5	0	0.7	10.5	0.6
REC	12.2	12.2	11.4	12.1	12.0	11.4	10.5	15.5	11.7	10.5	10.5	2.0	0	10.5	0	0.7	10.5	0.6
F.F	12.2	12.2	11.5	12.2	0	12.2	14.3	15.7	15.6	14.3	14.3	5.8	0	14.3	0	0.7	14.3	0.6
REW	12.2	12.2	11.5	12.2	−0.2	12.2	14.3	15.7	15.6	14.3	14.3	5.8	0	14.3	0	0.7	14.3	0.6
REF. NO.	QR6001			QR6003			QR6004			QR6005			QR6006			QR6008		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	5.0	0.3	0	0.1	5.2	0	5.4	0	0	12.2	0.2	5.1	4.9	0.1	5.4	0	5.4
PLAY	0	5.0	0.3	0	0.1	5.2	0	2.7	1.5	0	0	5.1	5.1	4.9	0.1	5.4	0	5.4
REC	0	5.1	0.3	0	0.1	5.2	0	2.7	1.5	0	12.2	0.2	5.1	4.9	0.2	5.4	0	5.4
F.F	0	5.1	0.3	0	0.1	5.2	0	3.2	2.1	0	12.2	0.2	5.1	4.9	0.1	5.4	0	5.4
REW	0	5.1	0.3	0	0.1	5.2	0	3.2	2.1	0	12.2	0.2	5.1	4.9	0.1	5.4	0	5.4
REF. NO.	QR6009			QR6011			QR6012			QR6013								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0.1	0.2	0	0	4.3	0.2	5.1	0.6	4.4	0	0.2	0						
PLAY	0.1	3.7	0	0	0.1	3.7	5.1	0.6	4.4	0	3.7	0						
REC	0.2	3.7	0	0	0.1	3.7	5.1	0.6	4.4	0	3.7	0						
F.F	0.1	0.7	0	0	4.3	0.7	5.1	0.6	4.4	0	0.7	0						
REW	0.1	0.7	0	0	4.3	0.7	5.1	0.6	4.4	0	0.7	0						

3-10. SYSTEM CONTROL Section In Main C.B.A. (VEP03472B)


MECHANISM CONNECTION C.B.A. (VEP00J52A)
(TO DEW SENSOR)
P1505
P1504
R1502
R1501
TO MODE SW
TO SOLENOID
LED C.B.A. UNIT (VXA2689)
REEL SENSOR C.B.A. (VEP00H31A)
IC1501
P1506
TO SAFETY TAB SW
PHOTO TR. (S) C.B.A. (VEP00H35A)
P1507
Q1501
C1501
PHOTO TR. (T) C.B.A. (VEP00K27A)
P1508
P1503
TO CASS. DOWN SW
R1503
C1502
Q1502
HI-FI AUDIO PACK
SERVO PACK
LUMINANCE & CHROMINANCE PACK
METER (R) ADJ.
METER (L) ADJ.
PB LEVEL
BIAS ADJ.
REC CURR. ADJ.
SLOW FREE RUN
PG SHIFTER
SLOW V FIX
V FIX
FREQ ADJ.
IC4001
IC6001
IC6004
IC4101
IC7551
IC7552
IC7553
P7302
P2001
P2002
P3002
P6002
P6003
P7401
P7403
GND

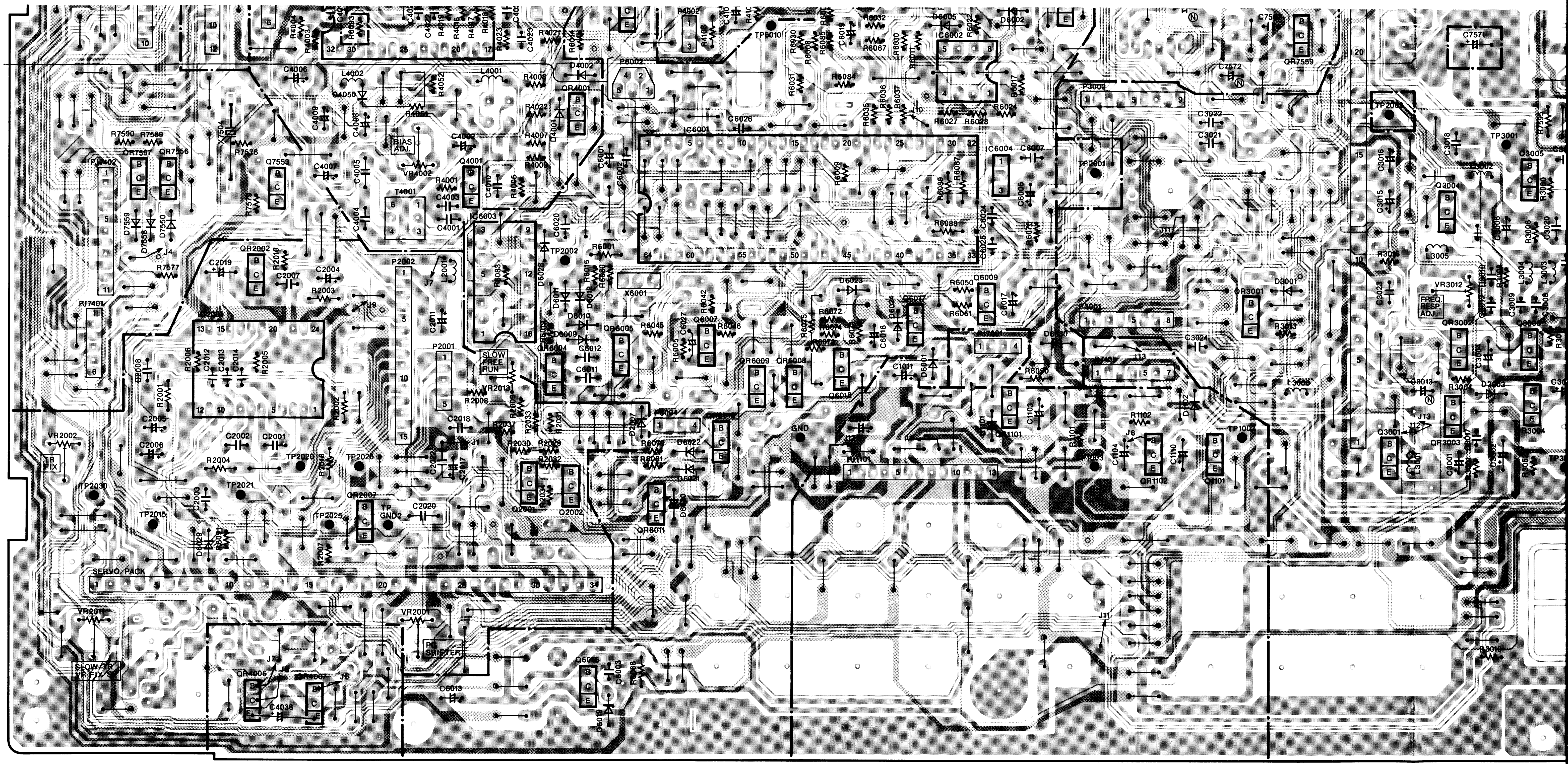
B)


METER (L) ADJ.
VR4004
VR4005
TP4002
TP4003
IC4001
HI-FI AUDIO PACK
P.B LEVEL
BIAS ADJ.
VR4002
T4001
N-SW SHIFT
VR4510
IC4101
REC CURR ADJ.
VR4503
Q6019
TP4511
J4
R7555
IC7552
IC7551
IC7553
P7302
LUMINANCE & CHROMINANCE PACK
INPUT/ OUTPUT PACK
J2
J3
C7571
TP2009
TP3001
Q4003
Q4005
QR6003
IC6001
IC6003
IC6004
P6002
TP6010
TP6011
TP2001
P3002
QR7559
C7569
C7572
FREQ RESP ADJ.
VR3012
QR3001
QR3002
QR3003
QR3004
Q3001
Q3004
Q3005
TP3002
TP2008
J13
L3005
L3006
P2002
P2001
SLOW FREE RUN
TP2002
TP2020
TP2025
TP2026
TP GND2
J7
J1
VR2001
PG SHIFTER
X6001
GND
P1101
QR1102
Q1101
TP1002
J11
Q6016
D6019
R3010

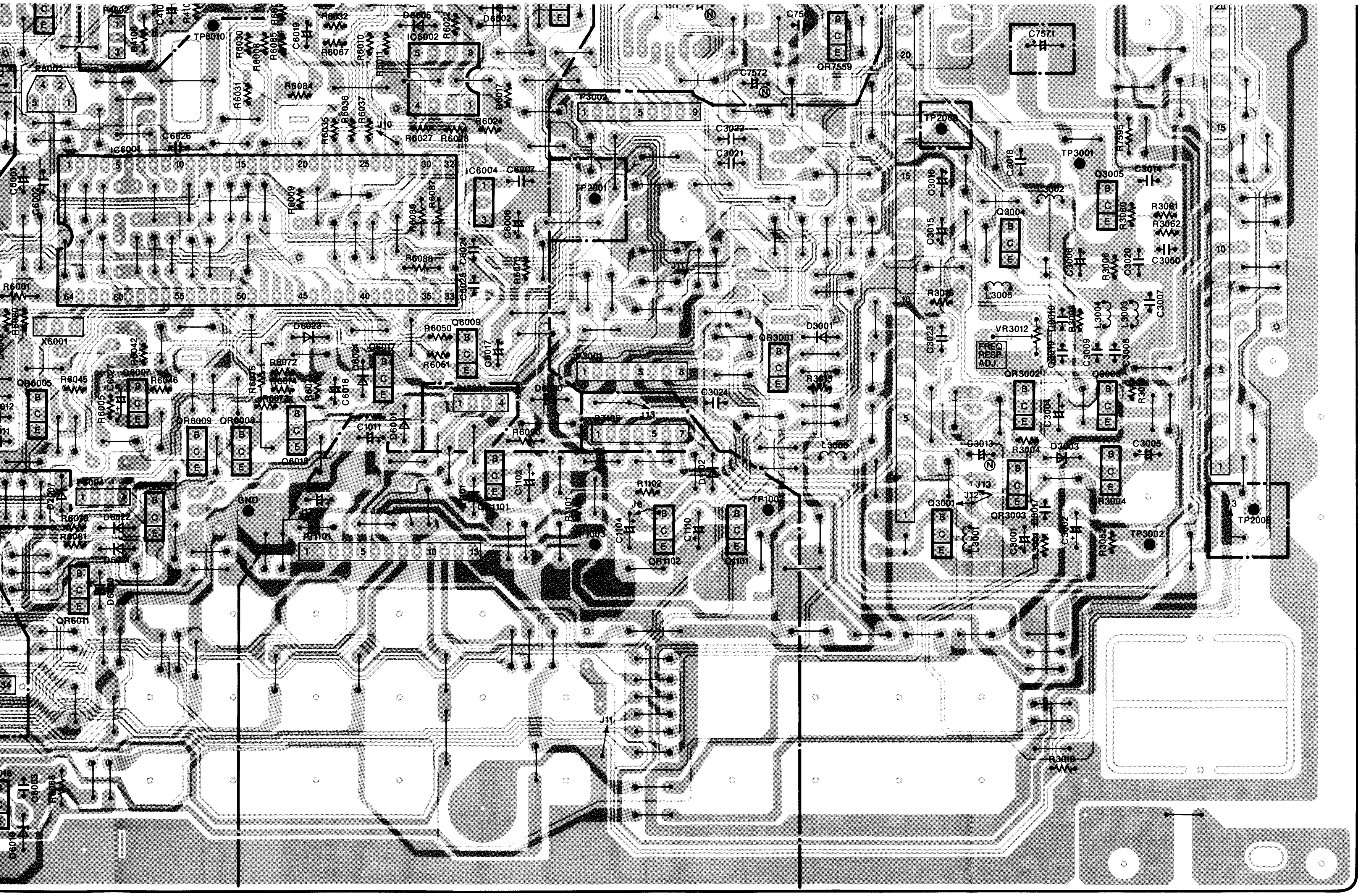


Next Page:
SERVO Section

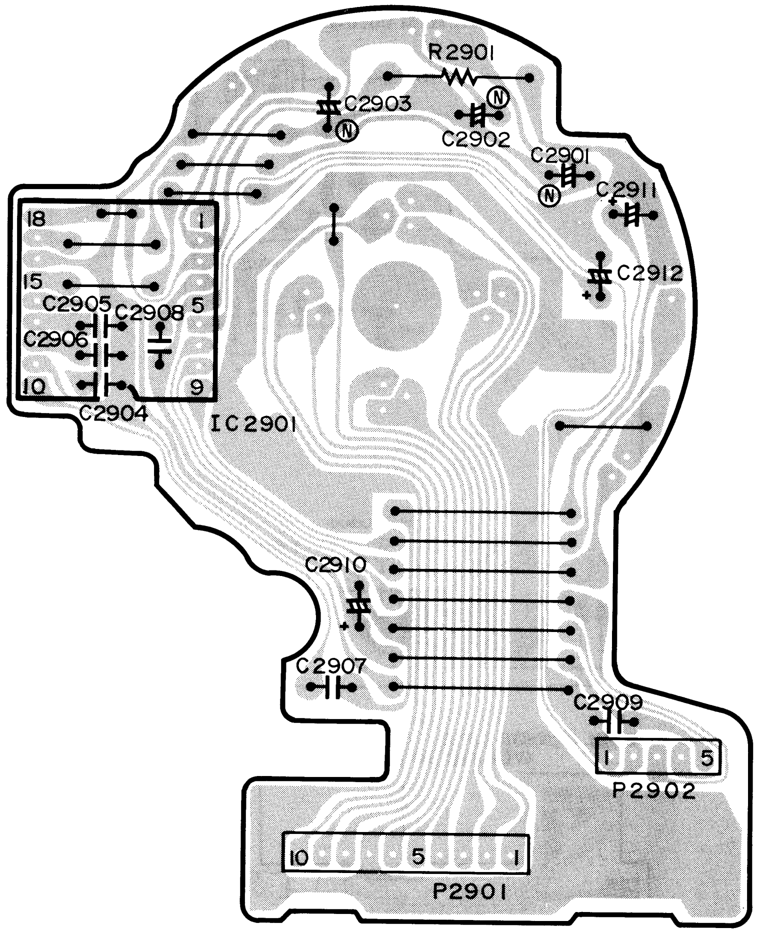
3-11. SERVO Section In Main C.B.A. (VEP03472B)

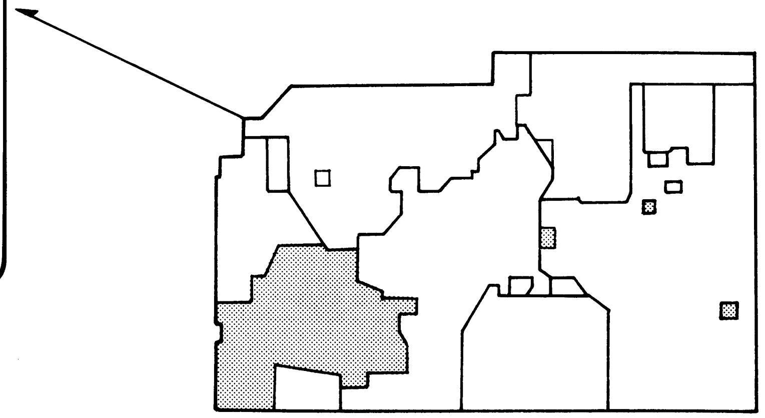


IC6001
IC6002
IC6003
IC6004
IC2001
SERVO PACK
P2001
P2002
P3001
P3002
P6002
T4001
X6001
TP2001
TP2002
TP2008
TP2015
TP2020
TP2021
TP2025
TP2026
TP2030
TP3001
TP6010
TP1003
TP1004
TP GND2
GND
BIAS ADJ.
VR4002
SLOW FREE RUN
VR2013
VR2002
VR2001
VR2011
VR3012
FREQ. RESP. ADJ.
TR FIX
SLOW TR VR FIX
PG SHIFTER
Q7553
QR7557
QR7556
QR7559
Q4001
QR4001
QR4006
QR4007
QR2002
QR2007
Q2001
Q2002
QR6004
QR6005
Q6007
QR6009
QR6008
Q6009
QR6011
Q6016
QR3001
QR3002
QR3003
Q3001
Q3004
Q3005
Q4101
QR1101
QR1102
PJ7401
PJ7402
PJ1101
J1
J4
J6
J7
J8
J10
J11
J12
J13
L4001
L4002
L2001
L3005
R7590
R7589
R7578
R7577
R4052
R4055
R2001
R2002
R2003
R2004
R2005
R2006
R2007
R2008
R2010
R2018
R2030
R2032
R2033
R2034
R6001
R6045
R6046
R6050
R6061
R6072
R6088
R3004
R3013
R3015
R3010
R1102
C4001
C4002
C4003
C4004
C4005
C4006
C4007
C4009
C2001
C2002
C2003
C2004
C2005
C2006
C2007
C2008
C2011
C2018
C2019
C2020
C6001
C6002
C6011
C6012
C6013
C6020
C6026
C3021
C3022
C3024
C7571
C7572
C1011
C1104
C1110
D4001
D4002
D4050
D7558
D7559
D7560
D2007
D6001
D6010
D6011
D6021
D6022
D6023
D6028
D3001
D3003
D1102

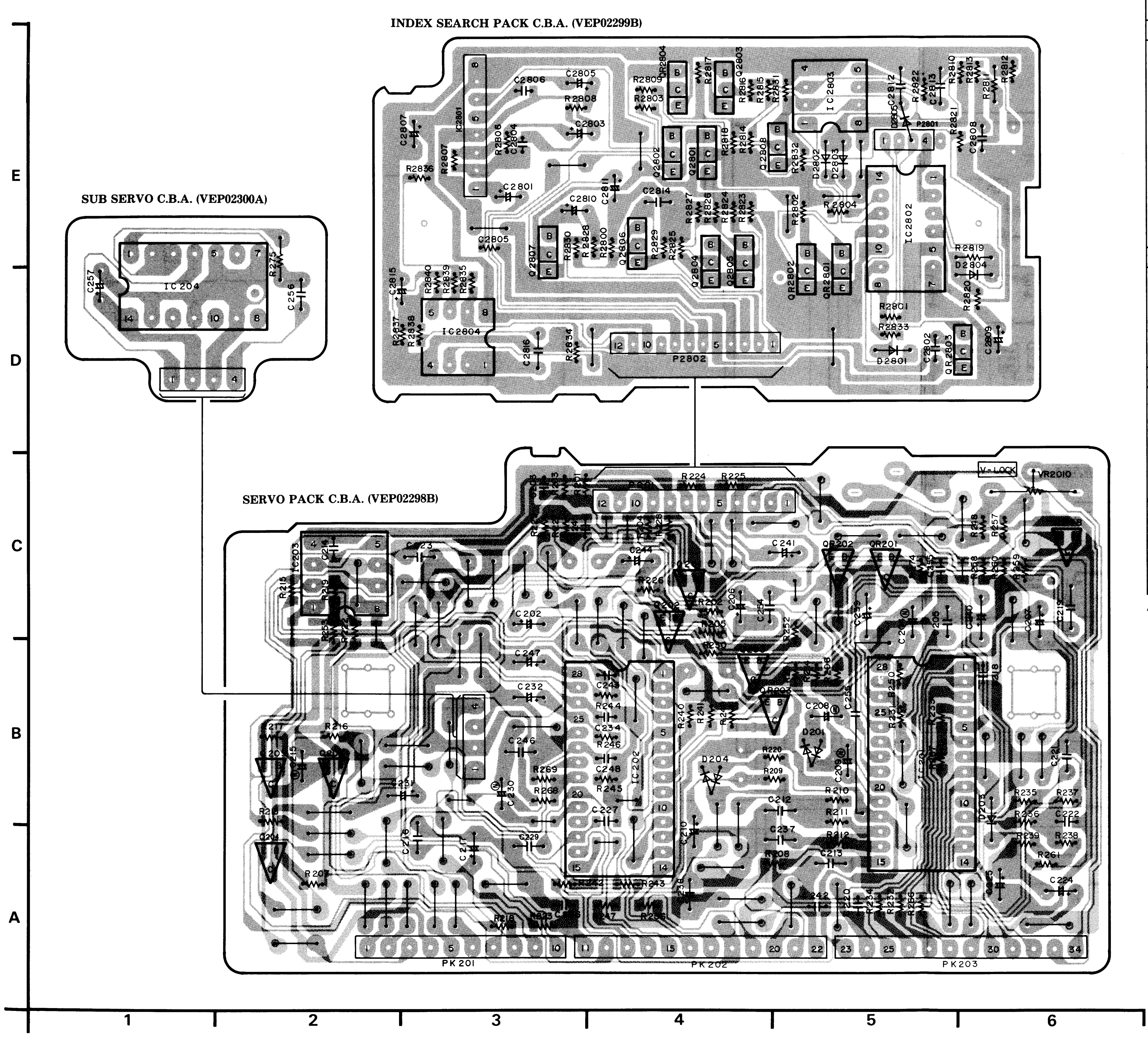

IC6001
IC6002
IC6004
TP6010
TP2001
TP2002
TP2008
TP3001
TP3002
TP1003
TP1004
GND
P3001
P3002
P6004
PJ1101
X6001
VR3012
FREQ. RESP. ADJ.
QR7559
QR3001
QR3002
QR3003
QR3004
QR1101
QR1102
QR6009
QR6008
QR6011
Q3001
Q3004
Q3005
Q1101
C7571
C7572
L3001
L3003
L3004
L3005
J11
J12
J13
R3010

3-12. CYLINDER DRIVE C.B.A.
(VEP00K62A)


R2901
C2903
C2902
C2901
C2911
C2912
18
1
15
5
C2905
C2908
C2906
10
9
C2904
IC2901
C2910
C2907
C2909
1
5
P2902
10
5
1
P2901



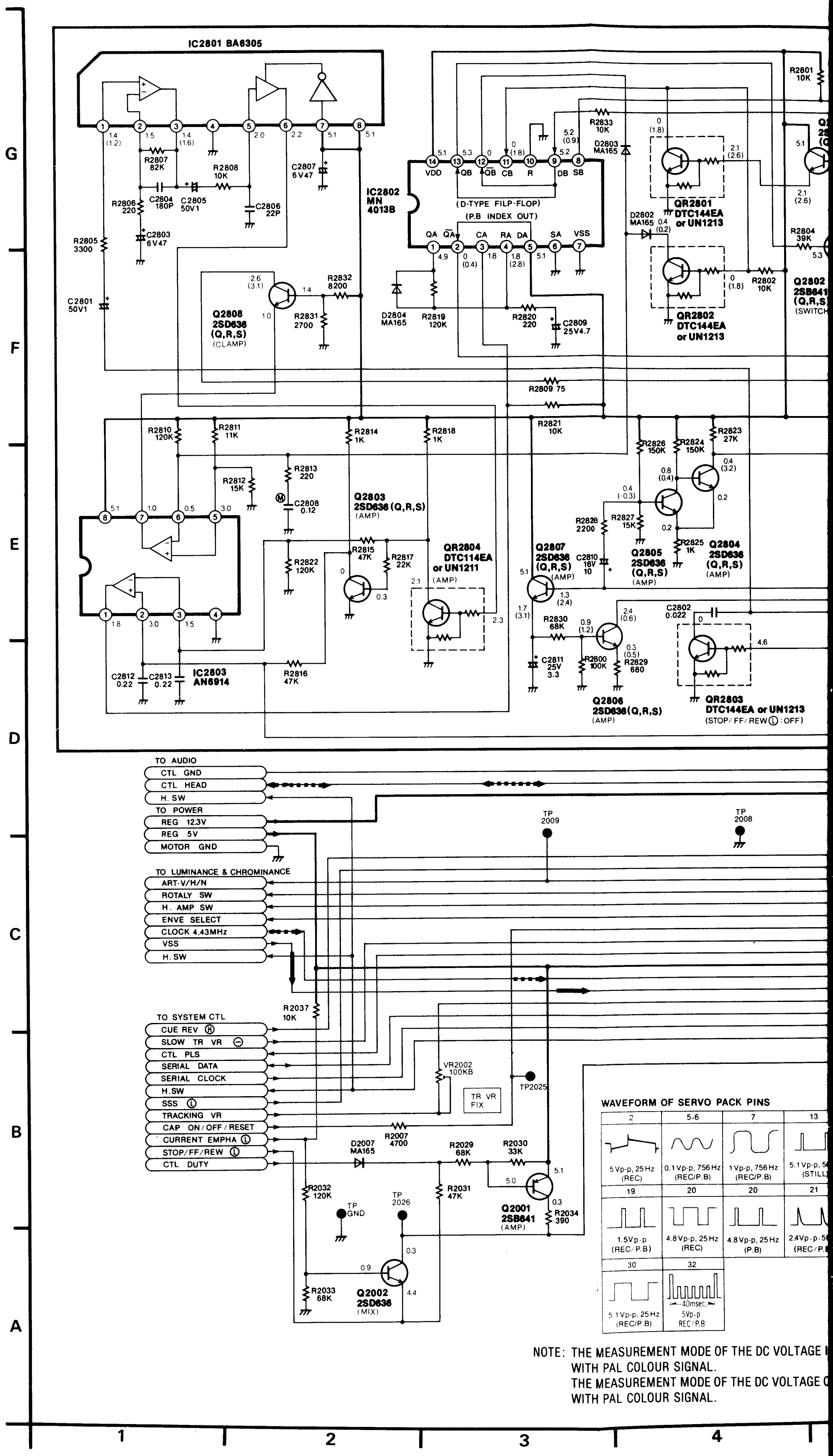
3-13. SERVO PACK C.B.A. (VEP02298B)


INDEX SEARCH PACK C.B.A. (VEP02299B)
SUB SERVO C.B.A. (VEP02300A)
SERVO PACK C.B.A. (VEP02298B)
IC204
IC2801
IC2802
IC2803
IC2804
P2801
P2802
IC202
VR2010
V+LOCK
PK201
PK202
PK203
A
B
C
D
E
1
2
3
4
5
6

3-14. SERVO SCHEMATIC DIAGRAM

SERVO PACK C.B.A. & INDEX SEARCH PACK C.B.A.	
Transistor	
Q201	C-4
Q202	C-4
Q203	B-4
Q204	A-2
Q205	B-2
Q206	B-2
Q208	C-6
Q2801	E-4
Q2802	E-4
Q2804	D-4
Q2805	D-4
Q2806	E-4
Q2807	E-3
Q2808	E-4
Q2817	E-4
Transistor & Resistor	
QR201	C-5
QR202	C-5
QR203	B-4
QR2801	D-5
QR2802	D-5
QR2803	D-6
QR2804	E-4
Integrated Circuit	
IC201	B-5
IC202	B-4
IC203	C-2
IC204	D-1
IC2801	E-3
IC2802	E-5
IC2803	E-5
IC2804	D-3
Adjustment	
VR2010	C-6
Connector	
P201	C-4
P2802	D-4

ADDRESS INFORMATION

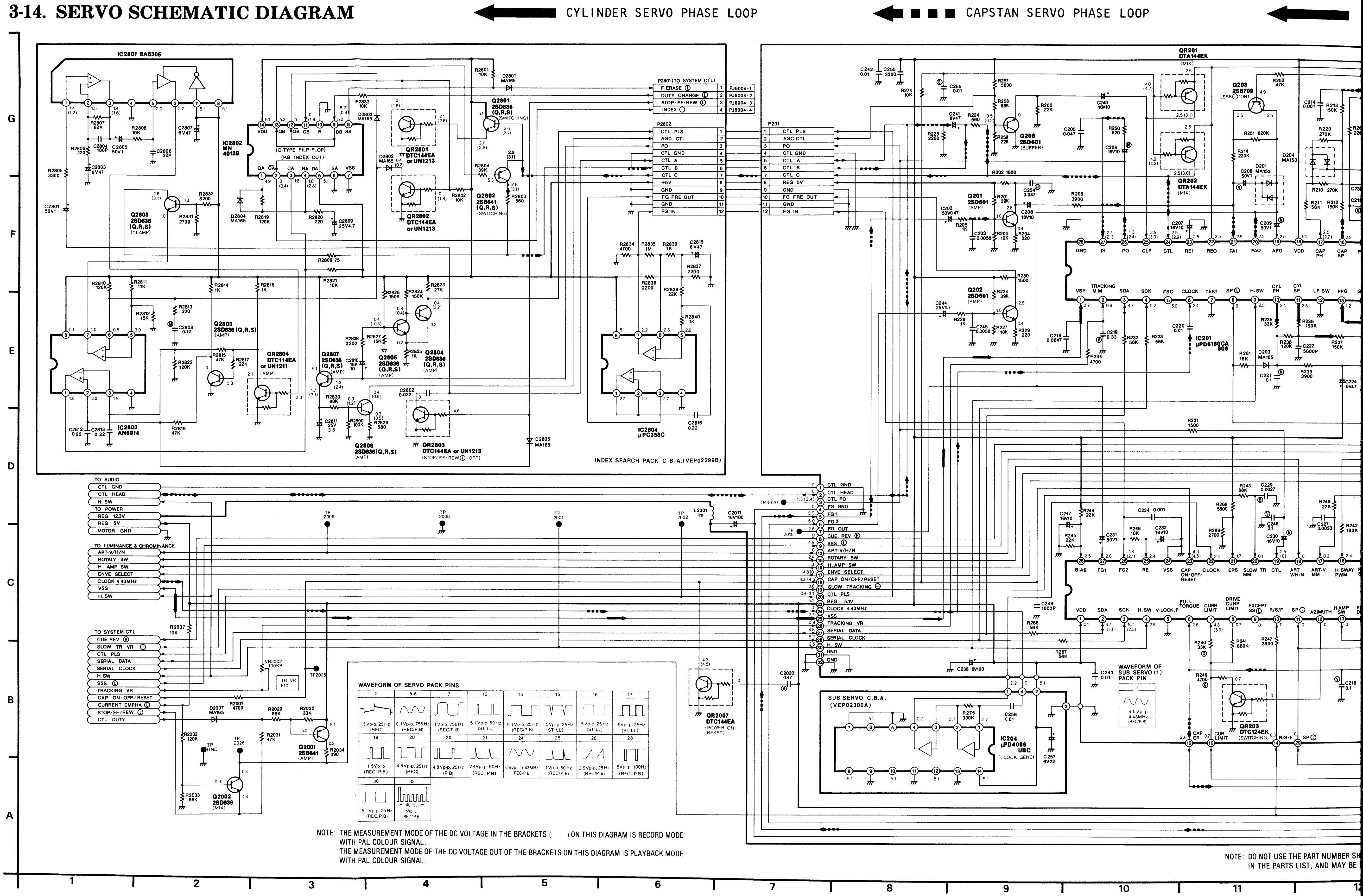

IC2801 BA6305
IC2802 MN 4013B
(D-TYPE FILP-FLOP)
(P.B INDEX OUT)
IC2803 AN6914
Q2808 2SD636 (Q,R,S) (CLAMP)
Q2803 2SD636 (Q,R,S) (AMP)
QR2804 DTC114EA or UN1211 (AMP)
Q2807 2SD636 (Q,R,S) (AMP)
Q2805 2SD636 (Q,R,S) (AMP)
Q2804 2SD636 (Q,R,S) (AMP)
Q2806 2SD636 (Q,R,S) (AMP)
QR2803 DTC114EA or UN1213 (STOP/FF/REW ⓛ : OFF)
QR2801 DTC144EA or UN1213
QR2802 DTC144EA or UN1213
TO AUDIO
CTL GND
CTL HEAD
H. SW
TO POWER
REG 12.3V
REG 5V
MOTOR GND
TO LUMINANCE & CHROMINANCE
ART-V/H/N
ROTALY SW
H. AMP SW
ENVE SELECT
CLOCK 4.43MHz
VSS
H. SW
TO SYSTEM CTL
CUE REV Ⓗ
SLOW TR VR ㊀
CTL PLS
SERIAL DATA
SERIAL CLOCK
H.SW
SSS ⓛ
TRACKING VR
CAP ON/OFF/RESET
CURRENT EMPHA ⓛ
STOP/FF/REW ⓛ
CTL DUTY
VR2002 100KB
TR VR FIX
TP2025
TP 2009
TP 2008
TP GND
TP 2026
Q2001 2SB641 (AMP)
Q2002 2SD636 (MIX)
WAVEFORM OF SERVO PACK PINS
5Vp-p, 25Hz (REC)
0.1Vp-p, 756Hz (REC/P.B)
1Vp-p, 756Hz (REC/P.B)
1.5Vp-p (REC/P.B)
4.8Vp-p, 25Hz (REC)
4.8Vp-p, 25Hz (P.B)
5.1Vp-p, 25Hz (REC/P.B)
5Vp-p REC/P.B
A
B
C
D
E
F
G
1
2
3
4

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE
WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE
WITH PAL COLOUR SIGNAL.

3-14. SERVO SCHEMATIC DIAGRAM

SERVO PACK C.B.A. & INDEX SEARCH PACK C.B.A.	
Transistor	
Q201	C-4
Q202	C-4
Q203	B-4
Q204	A-2
Q205	B-2
Q206	B-2
Q208	C-6
Q2801	E-4
Q2802	E-4
Q2804	D-4
Q2805	D-4
Q2806	E-4
Q2807	E-3
Q2808	E-4
Q2817	E-4
Transistor & Resistor	
QR201	C-5
QR202	C-5
QR203	B-4
QR2801	D-5
QR2802	D-5
QR2803	D-6
QR2804	E-4
Integrated Circuit	
IC201	B-5
IC202	B-4
IC203	C-2
IC204	D-1
IC2801	E-3
IC2802	E-5
IC2803	E-5
IC2804	D-3
Adjustment	
VR2010	C-6
Connector	
P201	C-4
P2802	D-4

ADDRESS INFORMATION


CYLINDER SERVO PHASE LOOP
CAPSTAN SERVO PHASE LOOP
IC2801 BA6305
IC2802 MN 4013B
(D-TYPE FLIP-FLOP)
(P.B INDEX OUT)
IC2803 AN6914
IC2804 μPC358C
Q2801 2SD636 (Q,R,S) (SWITCHING)
Q2802 2SB641 (Q,R,S) (SWITCHING)
Q2803 2SD636 (Q,R,S) (AMP)
Q2804 2SD636 (Q,R,S) (AMP)
Q2805 2SD636 (Q,R,S) (AMP)
Q2806 2SD636 (Q,R,S) (AMP)
Q2807 2SD636 (Q,R,S) (AMP)
Q2808 2SD636 (Q,R,S) (CLAMP)
QR2801 DTC144EA or UN1213
QR2802 DTC144EA or UN1213
QR2803 DTC144EA or UN1213 (STOP/FF/REW Ⓛ: OFF)
QR2804 DTC114EA or UN1211 (AMP)
P2801 (TO SYSTEM CTL)
F.ERASE Ⓛ
DUTY CHANGE Ⓛ
STOP/FF/REW Ⓛ
INDEX Ⓛ
PJ6004-1
PJ6004-2
PJ6004-3
PJ6004-4
P2802
P201
CTL PLS
AGC CTL
PO
CTL GND
CTL A
CTL B
CTL C
+5V
REG 5V
GND
FG FRE OUT
FG IN
INDEX SEARCH PACK C.B.A.(VEP02299B)
QR201 DTA144EK (MIX)
QR202 DTA144EK (MIX)
QR203 DTC124EK (SWITCHING)
Q201 2SD601 (AMP)
Q202 2SD601 (AMP)
Q203 2SB709 (SSSⓁ ON)
Q208 2SD601 (BUFFER)
IC201 μPD6160CA 808
TO AUDIO
CTL GND
CTL HEAD
H. SW
TO POWER
REG 12.3V
REG 5V
MOTOR GND
TO LUMINANCE & CHROMINANCE
ART-V/H/N
ROTALY SW
H. AMP SW
ENVE SELECT
CLOCK 4.43MHz
VSS
H. SW
TO SYSTEM CTL
CUE REV Ⓗ
SLOW TR VR ⊖
CTL PLS
SERIAL DATA
SERIAL CLOCK
H.SW
SSS Ⓛ
TRACKING VR
CAP ON/OFF/RESET
CURRENT EMPHA Ⓛ
STOP/FF/REW Ⓛ
CTL DUTY
Q2001 2SB641 (AMP)
Q2002 2SD636 (MIX)
QR2007 DTC144EA (POWER ON RESET)
VR2002 100KB
TR VR FIX
TP2009
TP2008
TP2001
TP2002
TP2025
TP2026
TP3020
TP2015
TP GND
SUB SERVO C.B.A. (VEP02300A)
IC204 μPD4069 UBC (CLOCK GENE)
WAVEFORM OF SUB SERVO (1) PACK PIN
4.5Vp-p 4.43MHz (REC/P.B)
WAVEFORM OF SERVO PACK PINS
2: 5Vp-p, 25Hz (REC)
5·6: 0.1Vp-p, 756Hz (REC/P.B)
7: 1Vp-p, 756Hz (REC/P.B)
13: 5.1Vp-p, 50Hz (STILL)
15: 5.1Vp-p, 25Hz (REC/P.B)
15: 5Vp-p, 25Hz (STILL)
16: 5Vp-p, 25Hz (STILL)
17: 5Vp-p, 25Hz (STILL)
19: 1.5Vp-p (REC/P.B)
20: 4.8Vp-p, 25Hz (REC)
20: 4.8Vp-p, 25Hz (P.B)
21: 2.4Vp-p, 50Hz (REC/P.B)
24: 0.6Vp-p, 4.43MHz (REC/P.B)
25: 1Vp-p, 50Hz (REC/P.B)
26: 2.5Vp-p, 25Hz (REC/P.B)
28: 5Vp-p, 100Hz (REC/P.B)
30: 5.1Vp-p, 25Hz (REC/P.B)
32: 40msec, 5Vp-p (REC/P.B)
GND PI PO CLP CTL REI REO FAI FAO AFG VDD CAP PH CAP SP
VSY TRACKING M.M SDA SCK FSC CLOCK TEST SPⓁ H.SW CYL PH CYL SP LP SW PFG
BIAS FG1 FG2 RE VSS CAP ON/OFF/RESET CLOCK EPS SLOW TR MM CTL ART V/H/N ART-V MM H.SWAY PWM
VDD SDA SCK H.SW V-LOCK.P FULL TORQUE CURR LIMIT DRIVE CURR LIMIT EXCEPT SSⓁ R/S/F SPⓁ AZIMUTH H-AMP SW
CAP ER CUR LIMIT R/S/F SPⓁ
G
F
E
D
C
B
A
1
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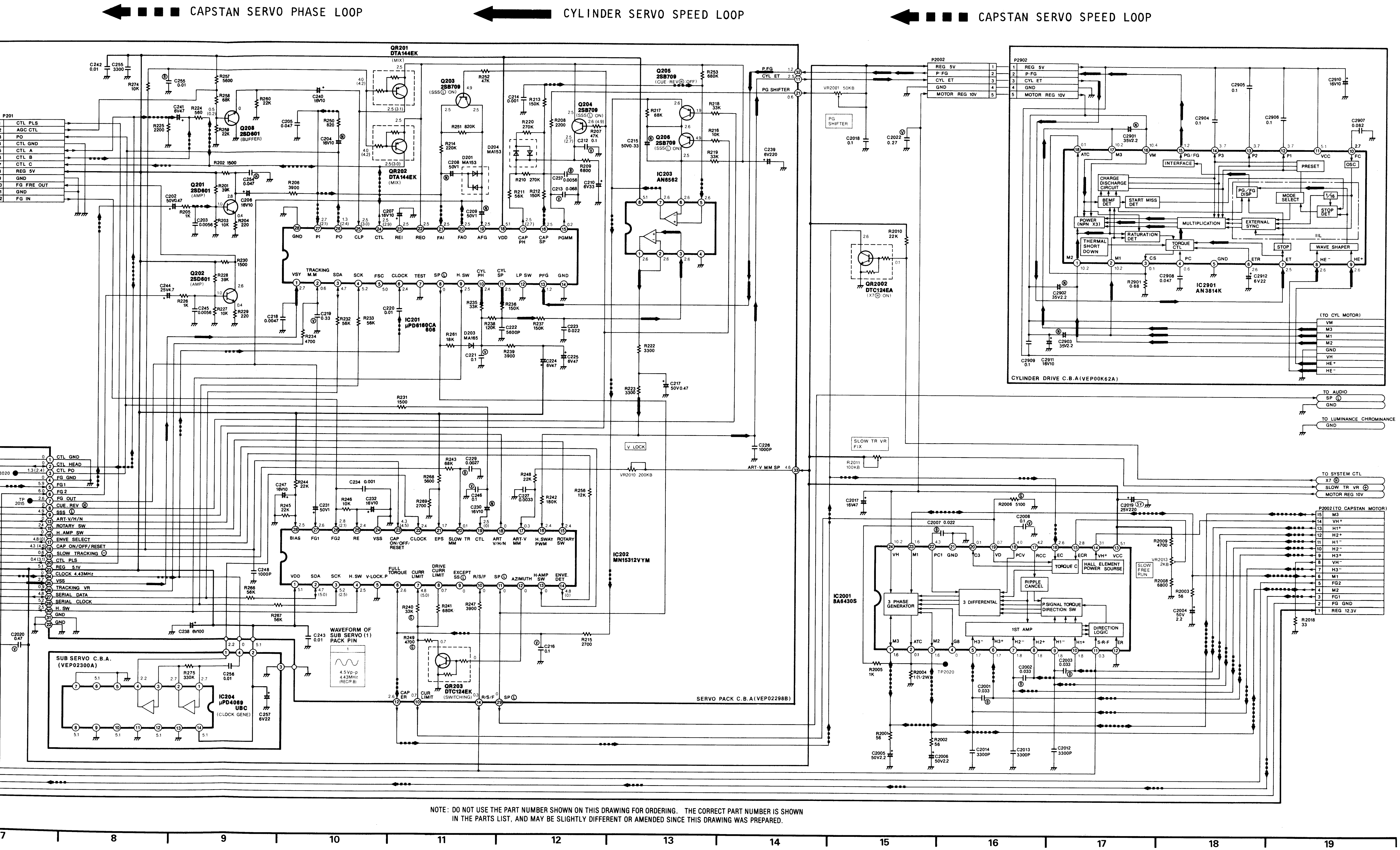
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE THE PART NUMBER SH
IN THE PARTS LIST, AND MAY BE


CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO SPEED LOOP
P201
CTL PLS
AGC CTL
PO
CTL GND
CTL A
CTL B
CTL C
REG 5V
GND
FG FRE OUT
GND
FG IN
QR201 DTA144EK (MIX)
QR202 DTA144EK (MIX)
Q203 2SB709 (SSS① ON)
Q204 2SB709 (SSS① ON)
Q205 2SB709 (CUE REV® OFF)
Q206 2SB709 (SSS① ON)
Q208 2SD601 (BUFFER)
Q201 2SD601 (AMP)
Q202 2SD601 (AMP)
IC203 AN6562
IC201 μPD6160CA 606
IC202 MN15312VYM
IC204 μPD4069 UBC (CLOCK GENE)
SUB SERVO C.B.A. (VEP02300A)
WAVEFORM OF SUB SERVO (1) PACK PIN
4.5Vp-p 4.43MHz (REC/PB)
QR203 DTC124EK (SWITCHING)
SERVO PACK C.B.A (VEP02298B)
P.FG
CYL ET
PG SHIFTER
VR2001 50KB
PG SHIFTER
ART-V MM SP
V LOCK
VR2010 200KB
SLOW TR VR FIX
QR2002 DTC124EA (X7® ON)
IC2001 BA6430S
3 PHASE GENERATOR
3 DIFFERENTIAL
RIPPLE CANCEL
P.SIGNAL TORQUE DIRECTION SW
1ST AMP
DIRECTION LOGIC
TORQUE C
HALL ELEMENT POWER SOURSE
SLOW FREE RUN
VR2013 2KB
P2002
REG 5V
P·FG
CYL ET
GND
MOTOR REG 10V
P2902
IC2901 AN3814K
INTERFACE
PRESET
OSC
CHARGE DISCHARGE CIRCUIT
BEMF DET
START MISS DET
PG/FG DISP
MODE SELECT
1/16
STOP DET
POWER (NPN X3)
MULTIPLICATION
EXTERNAL SYNC
SATURATION DET
THERMAL SHORT DOWN
TORQUE CTL
STOP
WAVE SHAPER
CYLINDER DRIVE C.B.A (VEP00K62A)
(TO CYL MOTOR)
VM
M3
M1
M2
GND
VH
HE+
HE-
TO AUDIO
SP ①
GND
TO LUMINANCE CHROMINANCE
GND
TO SYSTEM CTL
X7 ®
SLOW TR VR ⊖
MOTOR REG 10V
P2002 (TO CAPSTAN MOTOR)
M3
VH+
H1+
H2+
H1-
H2-
H3+
VH-
H3-
M1
FG2
M2
FG1
FG GND
REG 12.3V
CTL GND
CTL HEAD
CTL PO
FG GND
FG1
FG 2
FG OUT
CUE. REV ®
SSS ①
ART-V/H/N
ROTARY SW
H. AMP SW
ENVE SELECT
CAP ON/OFF/RESET
SLOW TRACKING ⊖
CTL PLS
REG 5.1V
CLOCK 4.43MHz
VSS
TRACKING VR
SERIAL DATA
SERIAL CLOCK
H. SW
GND
GND
TP 2015
TP2020
7
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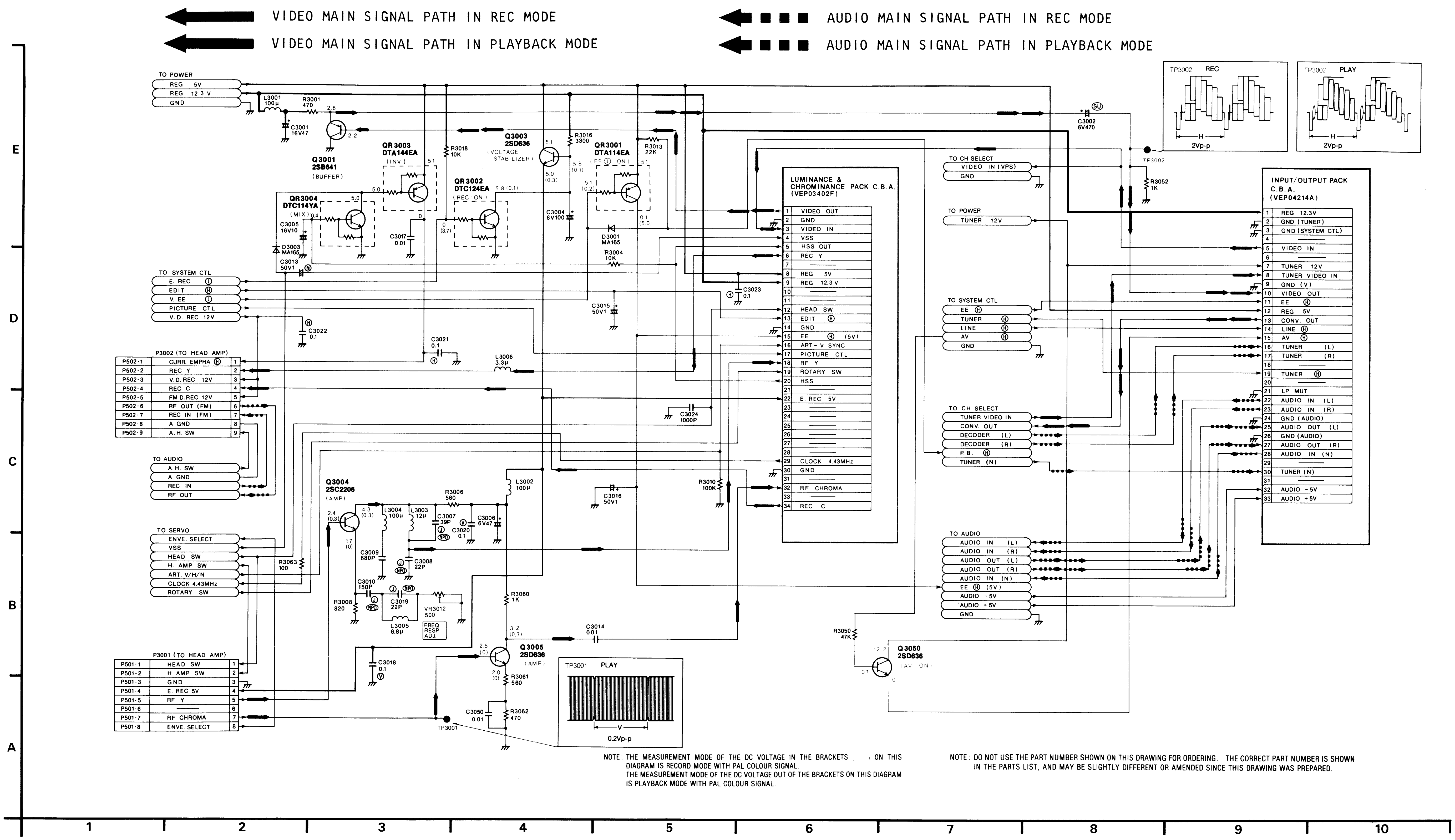
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Next Page:
LUMINANCE & CHROMINANCE Section

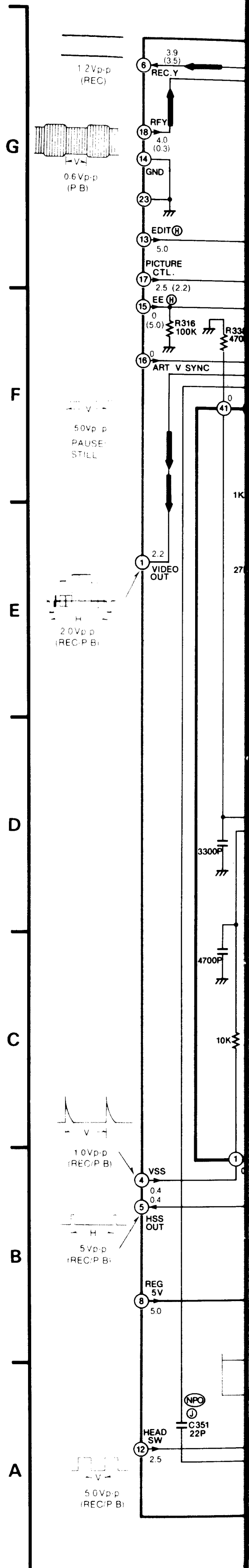
3-15. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

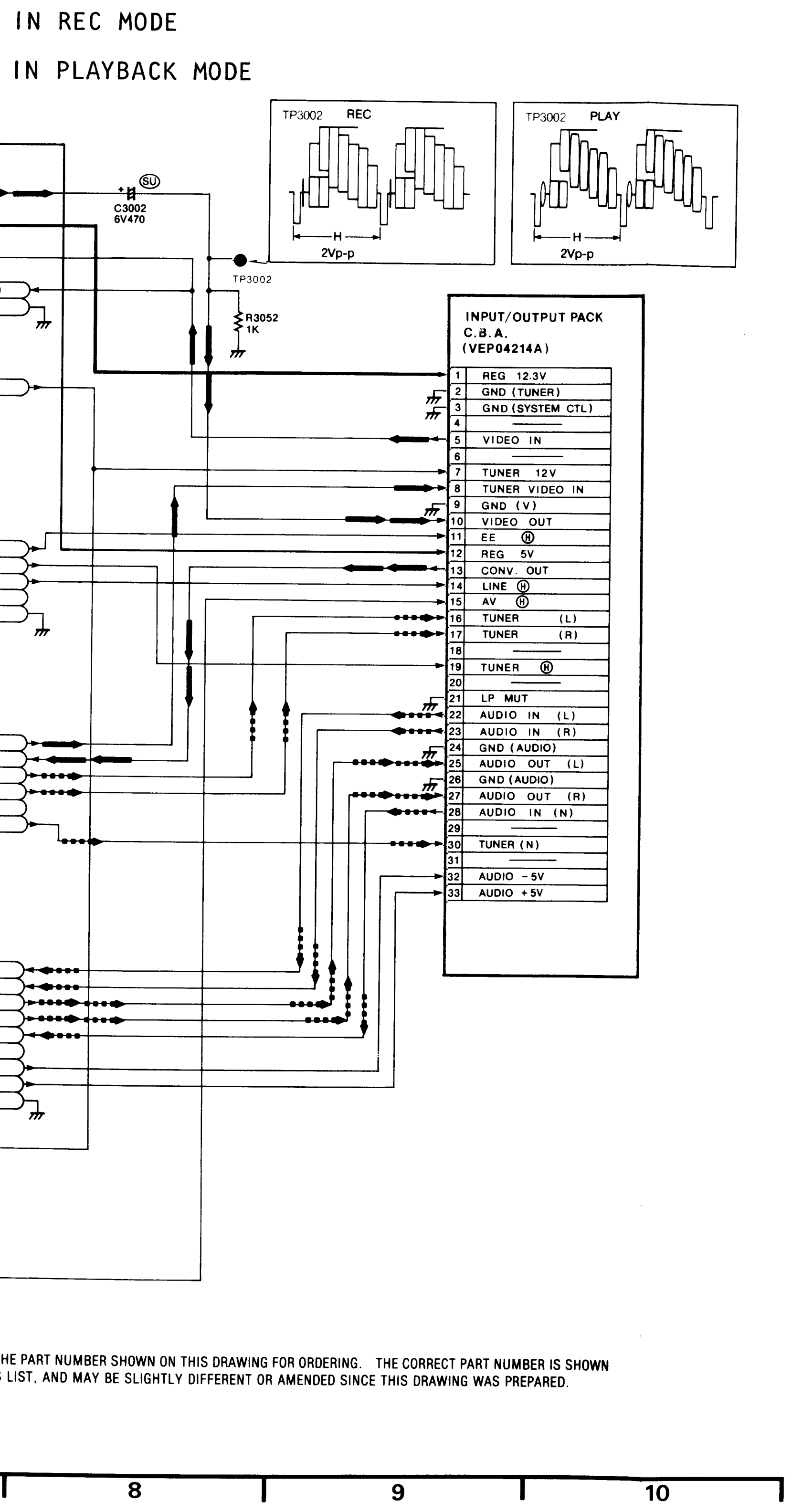

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
TO POWER
REG 5V
REG 12.3 V
GND
L3001 100μ
R3001 470
C3001 16V47
Q3001 2SB641 (BUFFER)
QR3003 DTA144EA (INV)
R3018 10K
Q3003 2SD636 (VOLTAGE STABILIZER)
R3016 3300
QR3001 DTA114EA (EE ⓘ ON)
R3013 22K
QR3004 DTC114YA (MIX)
QR3002 DTC124EA (REC ON)
C3005 16V10
D3003 MA165
C3013 50V1
C3017 0.01
C3004 6V100
D3001 MA165
R3004 10K
C3015 50V1
C3023 0.1
TO SYSTEM CTL
E. REC Ⓛ
EDIT Ⓗ
V. EE Ⓛ
PICTURE CTL
V. D. REC 12V
C3022 0.1
C3021 0.1
L3006 3.3μ
C3024 1000P
P3002 (TO HEAD AMP)
P502-1 CURR. EMPHA Ⓗ
P502-2 REC Y
P502-3 V. D. REC 12V
P502-4 REC C
P502-5 FM D.REC 12V
P502-6 RF OUT (FM)
P502-7 REC IN (FM)
P502-8 A GND
P502-9 A. H. SW
TO AUDIO
A. H. SW
A GND
REC IN
RF OUT
TO SERVO
ENVE. SELECT
VSS
HEAD SW
H. AMP SW
ART. V/H/N
CLOCK 4.43MHz
ROTARY SW
R3063 100
Q3004 2SC2206 (AMP)
L3004 100μ
L3003 12μ
R3006 560
C3007 39P
C3020 0.1
C3006 6V47
L3002 100μ
C3009 680P
C3008 22P
C3010 150P
C3019 22P
R3008 820
L3005 6.8μ
VR3012 500
FREQ RESP ADJ.
R3060 1K
C3014 0.01
C3018 0.1
Q3005 2SD636 (AMP)
R3061 560
C3050 0.01
R3062 470
TP3001
TP3001 PLAY
0.2Vp-p
P3001 (TO HEAD AMP)
P501-1 HEAD SW
P501-2 H. AMP SW
P501-3 GND
P501-4 E. REC 5V
P501-5 RF Y
P501-6 ———
P501-7 RF CHROMA
P501-8 ENVE. SELECT
C3016 50V1
R3010 100K
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03402F)
1 VIDEO OUT
2 GND
3 VIDEO IN
4 VSS
5 HSS OUT
6 REC Y
8 REG 5V
9 REG 12.3 V
12 HEAD SW
13 EDIT Ⓗ
14 GND
15 EE Ⓗ (5V)
16 ART - V SYNC
17 PICTURE CTL
18 RF Y
19 ROTARY SW
20 HSS
22 E. REC 5V
29 CLOCK 4.43MHz
30 GND
32 RF CHROMA
34 REC C
TO CH SELECT
VIDEO IN (VPS)
GND
TO POWER
TUNER 12V
TO SYSTEM CTL
EE Ⓗ
TUNER Ⓗ
LINE Ⓗ
AV Ⓗ
GND
TO CH SELECT
TUNER VIDEO IN
CONV. OUT
DECODER (L)
DECODER (R)
P. B. Ⓗ
TUNER (N)
TO AUDIO
AUDIO IN (L)
AUDIO IN (R)
AUDIO OUT (L)
AUDIO OUT (R)
AUDIO IN (N)
EE Ⓗ (5V)
AUDIO -5V
AUDIO +5V
GND
R3050 47K
Q3050 2SD636 (AV ON)
C3002 6V470
TP3002
R3052 1K
TP3002 REC
TP3002 PLAY
2Vp-p
INPUT/OUTPUT PACK C.B.A. (VEP04214A)
1 REG 12.3V
2 GND (TUNER)
3 GND (SYSTEM CTL)
5 VIDEO IN
7 TUNER 12V
8 TUNER VIDEO IN
9 GND (V)
10 VIDEO OUT
11 EE Ⓗ
12 REG 5V
13 CONV. OUT
14 LINE Ⓗ
15 AV Ⓗ
16 TUNER (L)
17 TUNER (R)
19 TUNER Ⓗ
21 LP MUT
22 AUDIO IN (L)
23 AUDIO IN (R)
24 GND (AUDIO)
25 AUDIO OUT (L)
26 GND (AUDIO)
27 AUDIO OUT (R)
28 AUDIO IN (N)
30 TUNER (N)
32 AUDIO -5V
33 AUDIO +5V
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

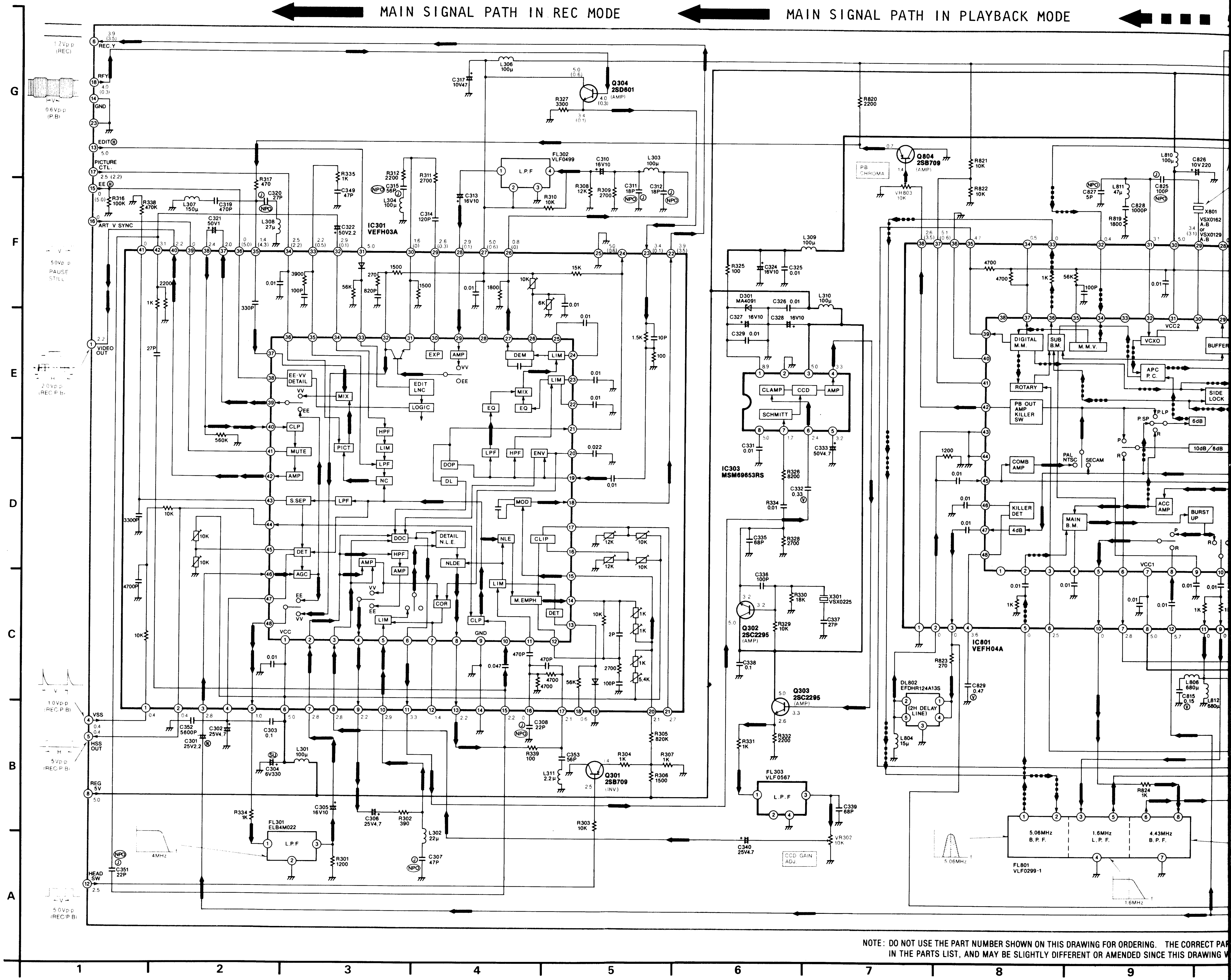
3-16. LUMINAN


G
F
E
D
C
B
A
1
REC Y
RFY
GND
EDIT Ⓗ
PICTURE CTL
EE Ⓗ
ART V SYNC
VIDEO OUT
VSS
HSS OUT
REG 5V
HEAD SW
C351 22P


IN REC MODE
IN PLAYBACK MODE
TP3002 REC
TP3002 PLAY
2Vp-p
TP3002
C3002 6V470
R3052 1K
INPUT/OUTPUT PACK
C.B.A.
(VEP04214A)
1 REG 12.3V
2 GND (TUNER)
3 GND (SYSTEM CTL)
5 VIDEO IN
7 TUNER 12V
8 TUNER VIDEO IN
9 GND (V)
10 VIDEO OUT
11 EE Ⓗ
12 REG 5V
13 CONV OUT
14 LINE Ⓗ
15 AV Ⓗ
16 TUNER (L)
17 TUNER (R)
19 TUNER Ⓗ
21 LP MUT
22 AUDIO IN (L)
23 AUDIO IN (R)
24 GND (AUDIO)
25 AUDIO OUT (L)
26 GND (AUDIO)
27 AUDIO OUT (R)
28 AUDIO IN (N)
30 TUNER (N)
32 AUDIO -5V
33 AUDIO +5V
8
9
10

HE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN
LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

3-16. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM


MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
G
F
E
D
C
B
A
REC Y
RFY
GND
EDIT Ⓗ
PICTURE CTL
EE Ⓗ
ART V SYNC
VIDEO OUT
VSS
HSS OUT
REG 5V
HEAD SW
Q304 2SD601 (AMP)
L306 100μ
C317 10V47
R327 3300
FL302 VLF0499
L.P.F
C310 16V10
L303 100μ
IC301 VEFH03A
EE-VV DETAIL
MIX
EDIT LNC
LOGIC
EXP
AMP
DEM
LIM
EQ
CLP
MUTE
PICT
HPF
LPF
NC
DOP
DL
ENV
S.SEP
MOD
DOC
DETAIL N.L.E.
NLE
CLIP
DET
AGC
NLDE
COR
M.EMPH
VCC
GND
FL301 ELB4M022
Q301 2SB709 (INV)
4MHz
IC303 MSM69653RS
CLAMP
CCD
SCHMITT
D301 MA4091
Q302 2SC2295 (AMP)
Q303 2SC2295 (AMP)
X301 VSX0225
FL303 VLF0567
VR302 10K
CCD GAIN ADJ
PB CHROMA
VR803 10K
Q804 2SB709 (AMP)
IC801 VEFH04A
DIGITAL M.M.
SUB B.M.
M.M.V.
VCXO
BUFFER
APC P.C.
SIDE LOCK
ROTARY
PB OUT AMP KILLER SW
COMB AMP
PAL NTSC
SECAM
KILLER DET
4dB
MAIN B.M.
ACC AMP
BURST UP
6dB
10dB/6dB
X801 VSX0162 A.B VSX0129 A.B
DL802 EFDHR124A13S
(2H DELAY LINE)
FL801 VLF0299-1
5.06MHz B.P.F.
1.6MHz L.P.F.
4.43MHz B.P.F.
5.06MHz
1.6MHz
1
2
3
4
5
6
7
8
9

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PAR
IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING W

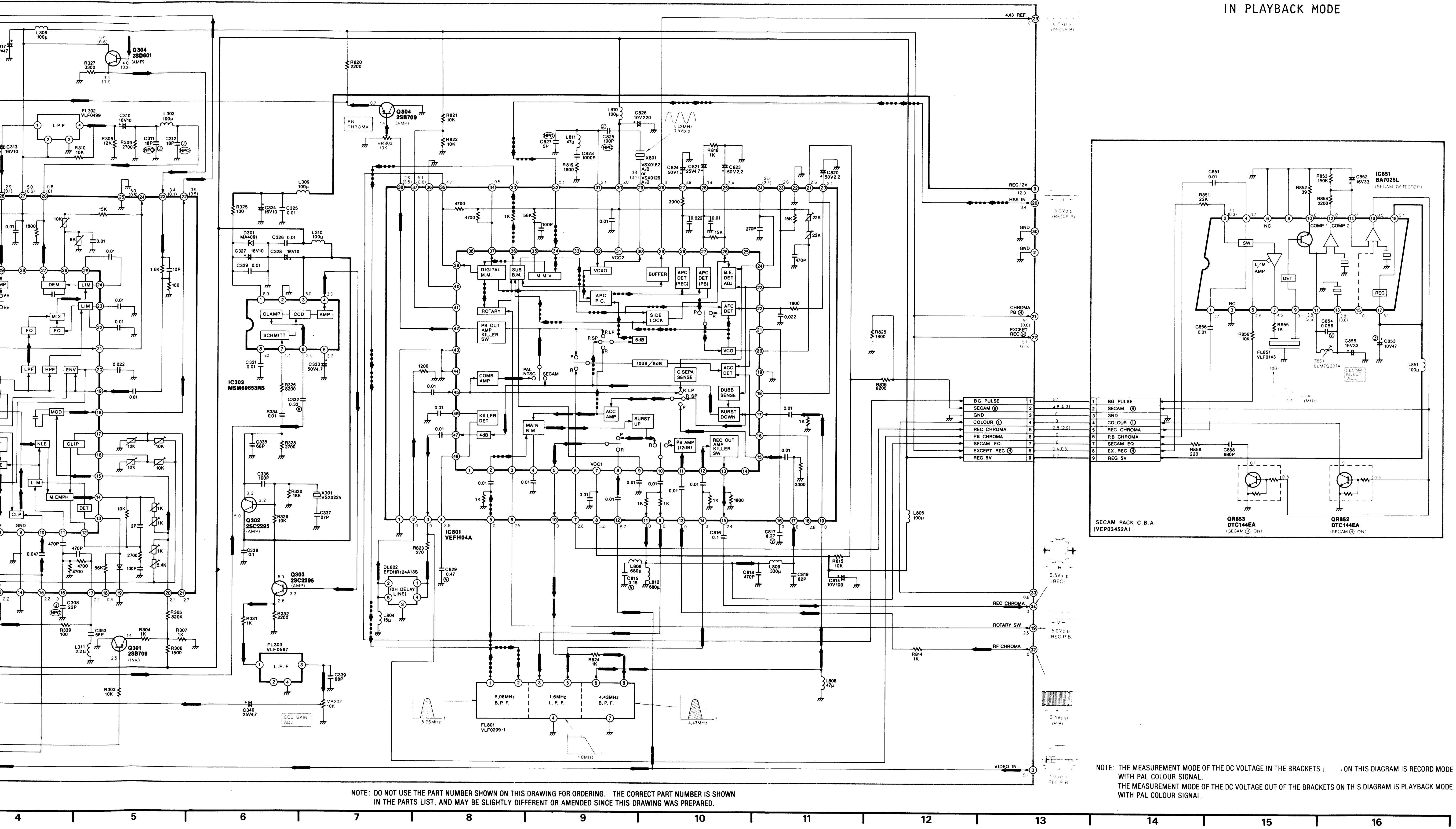
K SCHEMATIC DIAGRAM

AL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE

5.06MHz PHASE ROTATIONAL SIGNAL
IN PLAYBACK MODE



Q304 2SD601 (AMP)
L306 100μ
R327 3300
FL302 VLF0499
L.P.F
C310 16V10
L303 100μ
R308 12K
R309 2700
R310 10K
C311 18P
C312 18P
C313 16V10
L309 100μ
L310 100μ
R325 100
C324 16V10
C325 0.01
D301 MA4091
C326 0.01
C327 16V10
C328 16V10
C329 0.01
CLAMP
CCD
AMP
SCHMITT
IC303 MSM69653RS
C331 0.01
R326 8200
C332 0.33
C333 50V4.7
R334 0.01
C335 68P
R328 2700
C336 100P
R330 18K
X301 VSX0225
C337 27P
Q302 2SC2295 (AMP)
R329 10K
C338 0.1
Q303 2SC2295 (AMP)
R331 1K
R332 2200
FL303 VLF0567
L.P.F
C339 68P
VR302 10K
C340 25V4.7
CCD GAIN ADJ.
DEM
LIM
MIX
EQ
LPF
HPF
ENV
MOD
NLE
CLIP
LIM
M.EMPH
DET
CLP
GND
R339 100
C353 56P
R304 1K
R307 1K
R305 820K
R306 1500
L311 2.2μ
Q301 2SB709 (INV.)
R303 10K
C308 22P
R820 2200
Q804 2SB709 (AMP)
PB CHROMA
VR803 10K
R821 10K
R822 10K
L810 100μ
C826 10V 220
4.43MHz 0.5Vp-p
L811 47μ
C825 100P
C827 5P
C828 1000P
R819 1800
X801 VSX0162 A.B or VSX0129 A.B
R818 1K
C824 50V1
C821 25V4.7
C823 50V2.2
C820 50V2.2
DIGITAL M.M.
SUB B.M.
M.M.V.
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B.E. DET ADJ.
APC P.C
SIDE LOCK
6dB
AFC DET
VCO
ROTARY
PB OUT AMP KILLER SW
COMB AMP
PAL NTSC
SECAM
10dB/6dB
C.SEPA SENSE
ACC DET
DUBB SENSE
ACC AMP
BURST UP
BURST DOWN
KILLER DET
4dB
MAIN B.M.
PB AMP (12dB)
REC OUT AMP KILLER SW
VCC1
VCC2
IC801 VEFH04A
DL802 EFDHR124A13S
(2H DELAY LINE)
L804 15μ
R823 270
C829 0.47
L806 680μ
C815 0.15
L812 680μ
C818 470P
L809 330μ
C819 82P
C816 0.1
C817 6.27
R815 10K
C814 10V100
L805 100μ
R824 1K
5.06MHz B.P.F.
1.6MHz L.P.F.
4.43MHz B.P.F.
FL801 VLF0299-1
5.06MHz
4.43MHz
1.6MHz
L808 47μ
R814 1K
R825 1800
R816 8200
4.43 REF
REG.12V
HSS IN
GND
CHROMA PB Ⓡ
EXCEPT REC Ⓡ
REC CHROMA
ROTARY SW
RF CHROMA
VIDEO IN
0.5Vp-p (REC)
5.0Vp-p (REC,P.B)
0.4Vp-p (P.B)
BG PULSE
SECAM Ⓡ
GND
COLOUR Ⓛ
REC CHROMA
PB CHROMA
SECAM EQ
EXCEPT REC Ⓡ
REG 5V
P.B CHROMA
EX REC Ⓡ
IC851 BA7025L (SECAM DETECTOR)
C851 0.01
R851 22K
R853 150K
C852 16V33
R852 39
R854 2200
SW
L/M AMP
DET
COMP-1
COMP-2
REG
NC
C856 0.01
R856 10K
R855 1K
C854 0.056
C855 16V33
C853 10V47
FL851 VLF0143
T851 ELM7Q207A
SECAM KILLER ADJ
L851 100μ
R858 220
C858 680P
SECAM PACK C.B.A. (VEP03452A)
QR853 DTC144EA (SECAM Ⓡ ON)
QR852 DTC144EA (SECAM Ⓡ ON)
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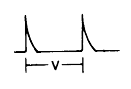
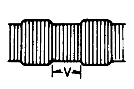
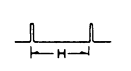
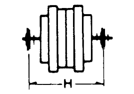
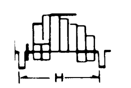
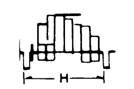
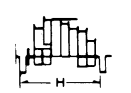
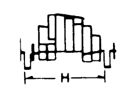
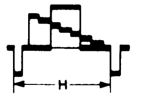
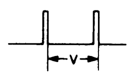
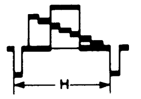
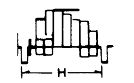
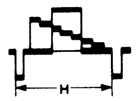
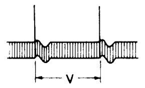
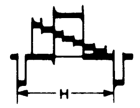
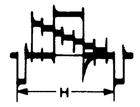
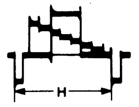
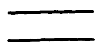
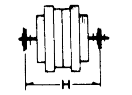
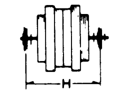
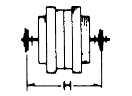
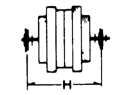
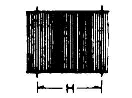
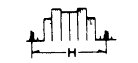
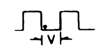
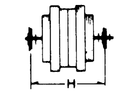
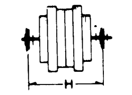
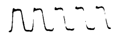
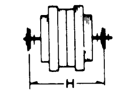
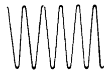
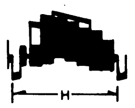
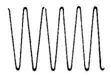
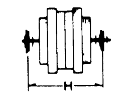
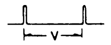
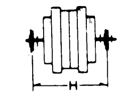
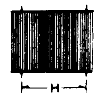
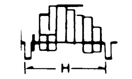
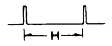
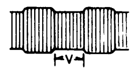
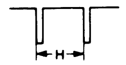
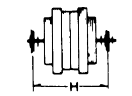
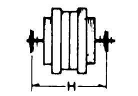
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

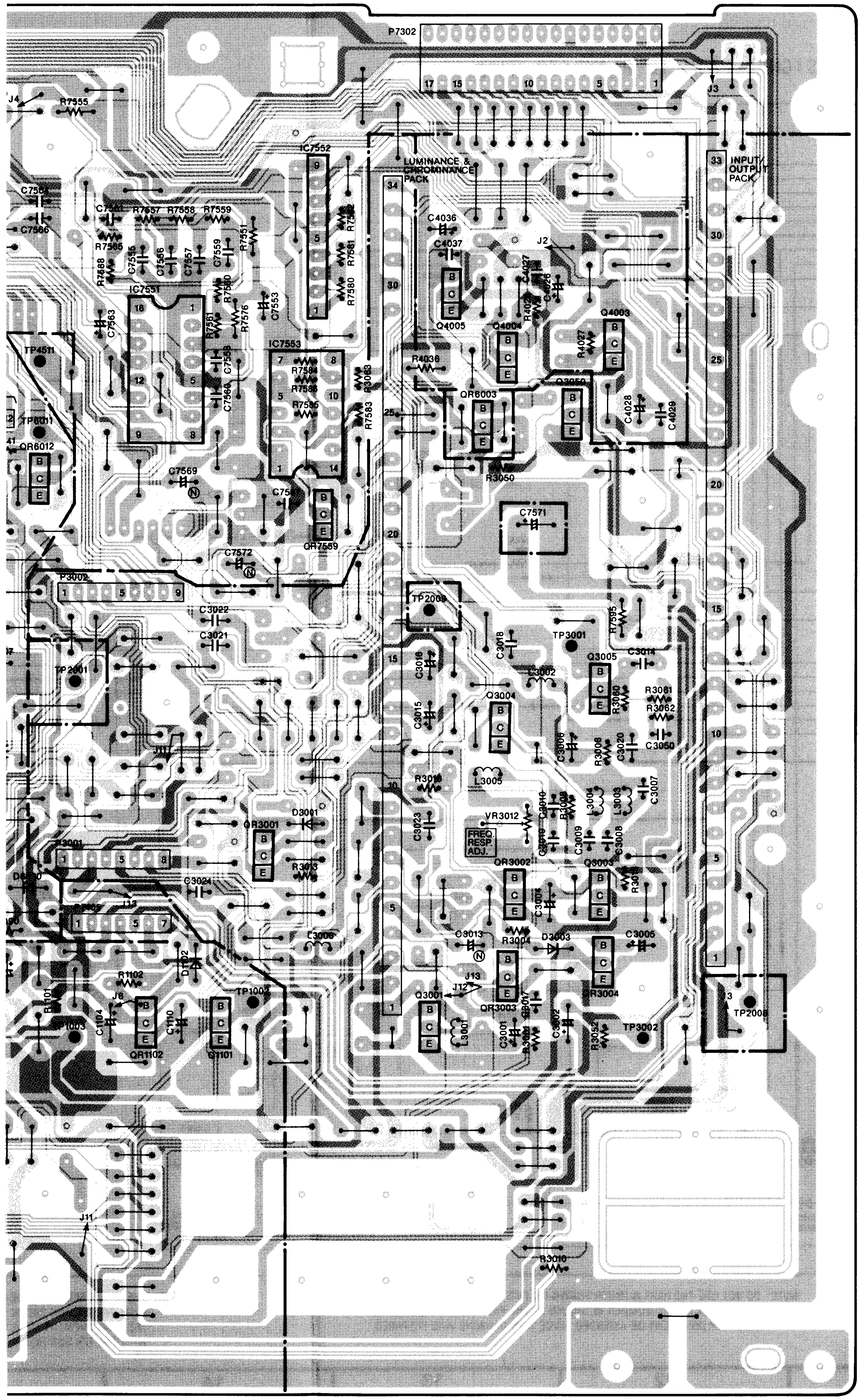
IC301 (VEFH03A)

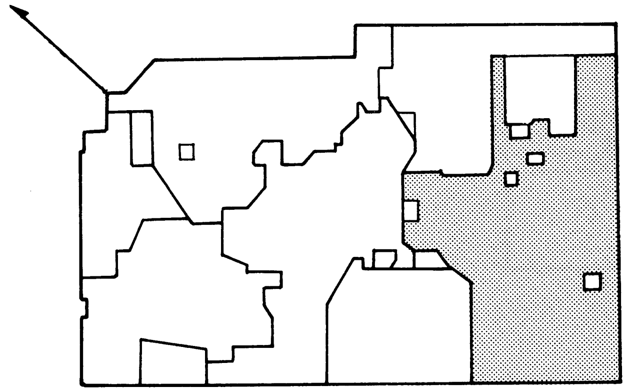
PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
1	 1.0Vp-p (REC/P.B)	23	 0.5Vp-p (P.B)
2	 5.0Vp-p (REC/P.B)	35	 0.35Vp-p (P.B)
3	 1.0Vp-p (REC/P.B)	37, 38	 0.8Vp-p (REC)
5	 0.8Vp-p (REC)	37, 38	 0.8Vp-p (P.B)
5	 1Vp-p (P.B)	39	 5.0Vp-p (PAUSE/STILL)
7, 8	 0.4Vp-p (REC) 0.5Vp-p (P.B)	40	 2.0Vp-p (REC/P.B)
11	 0.3Vp-p (REC/P.B)	41	 0.3Vp-p (REC/P.B)
13, 15	 0.8Vp-p (REC/P.B)		
16	 0.6Vp-p (REC/P.B)		
17	 0.8Vp-p (REC/P.B)		
22	 1.2Vp-p (REC)		

IC801 (VEFH04A)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	 0.15Vp-p (REC/P.B)	15	 0.5Vp-p (REC)
3	 1Vp-p (REC/P.B)	17	 0.4Vp-p (REC) 0.3Vp-p (P.B)
5	 0.25Vp-p (REC/P.B)	18	 1.2Vp-p (REC) 1.0Vp-p (P.B)
6	 5.0Vp-p (REC/P.B)	19	 0.25Vp-p (REC/P.B)
7	 0.6Vp-p (REC) 0.4Vp-p (P.B)	28	 0.7Vp-p (REC/P.B)
9	 0.3Vp-p (P.B) 0.45Vp-p (REC)	29	 1.0Vp-p (REC/P.B)
10	 1.0Vp-p (REC)	31	 0.7Vp-p (REC/P.B)
10	 0.7Vp-p (P.B)	32	 5.0Vp-p (REC/P.B)
11	 0.4Vp-p (REC) 0.2Vp-p (P.B)	33	 0.35Vp-p (REC/P.B)
12	 1.0Vp-p (REC/P.B)	34	 5.0Vp-p (REC/P.B)
13	 0.3Vp-p (P.B)	35	 5.0Vp-p (REC/P.B)
14	 0.3Vp-p (REC) 0.2Vp-p (P.B)	38	 1.0Vp-p (P.B)

3-17. LUMINANCE & CHROMINANCE Section In Main C.B.A. (VEP03472B)

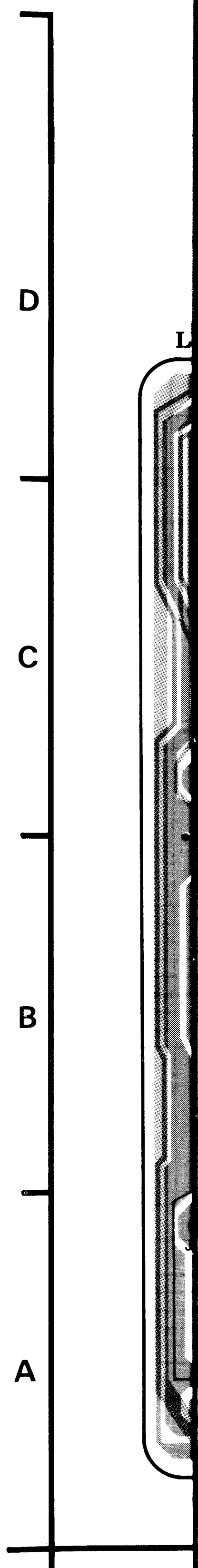

P7302
J3
J4
R7555
IC7552
IC7551
IC7553
LUMINANCE & CHROMINANCE PACK
INPUT/ OUTPUT PACK
TP4511
TP8001
QR6012
QR6003
QR7559
Q4003
Q4004
Q4005
C7569
C7571
C7572
P3002
TP2009
TP2001
TP3001
Q3004
Q3005
QR3001
QR3002
QR3003
Q3001
D3001
D3003
VR3012
FREQ RESP. ADJ.
TP1002
TP1003
QR1102
Q1101
TP3002
TP2008
J11
J12
J13
R3010



3-18. LU

LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor	
Q301 Q302 Q303 Q304 Q804	C-5 B-5 B-5 A-3 D-7
Transistor & Resistor	
QR852 QR853	D-7 D-7
Integrated Circuit	
IC301 IC303 IC801 IC851	C-1 B-5 C-7 D-6
Adjustment	
VR302 VR803	A-5 D-7

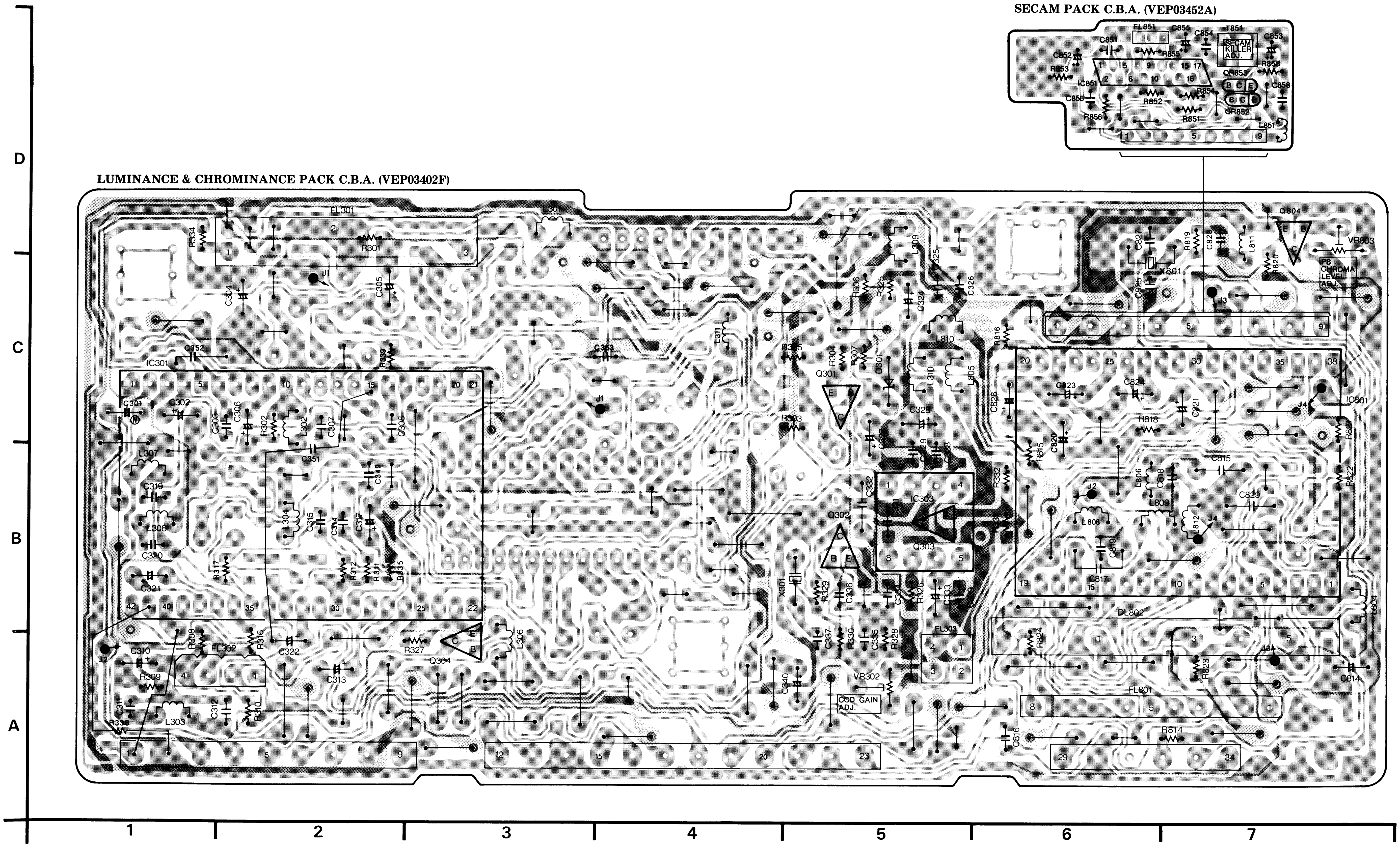
ADDRESS INFORMATION

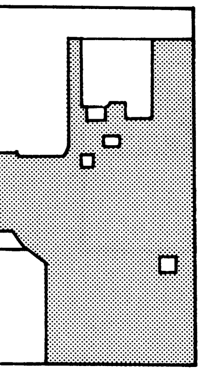


3-18. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03402F)

LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor	
Q301	C-5
Q302	B-5
Q303	B-5
Q304	A-3
Q804	D-7
Transistor & Resistor	
QR852	D-7
QR853	D-7
Integrated Circuit	
IC301	C-1
IC303	B-5
IC801	C-7
IC851	D-6
Adjustment	
VR302	A-5
VR803	D-7

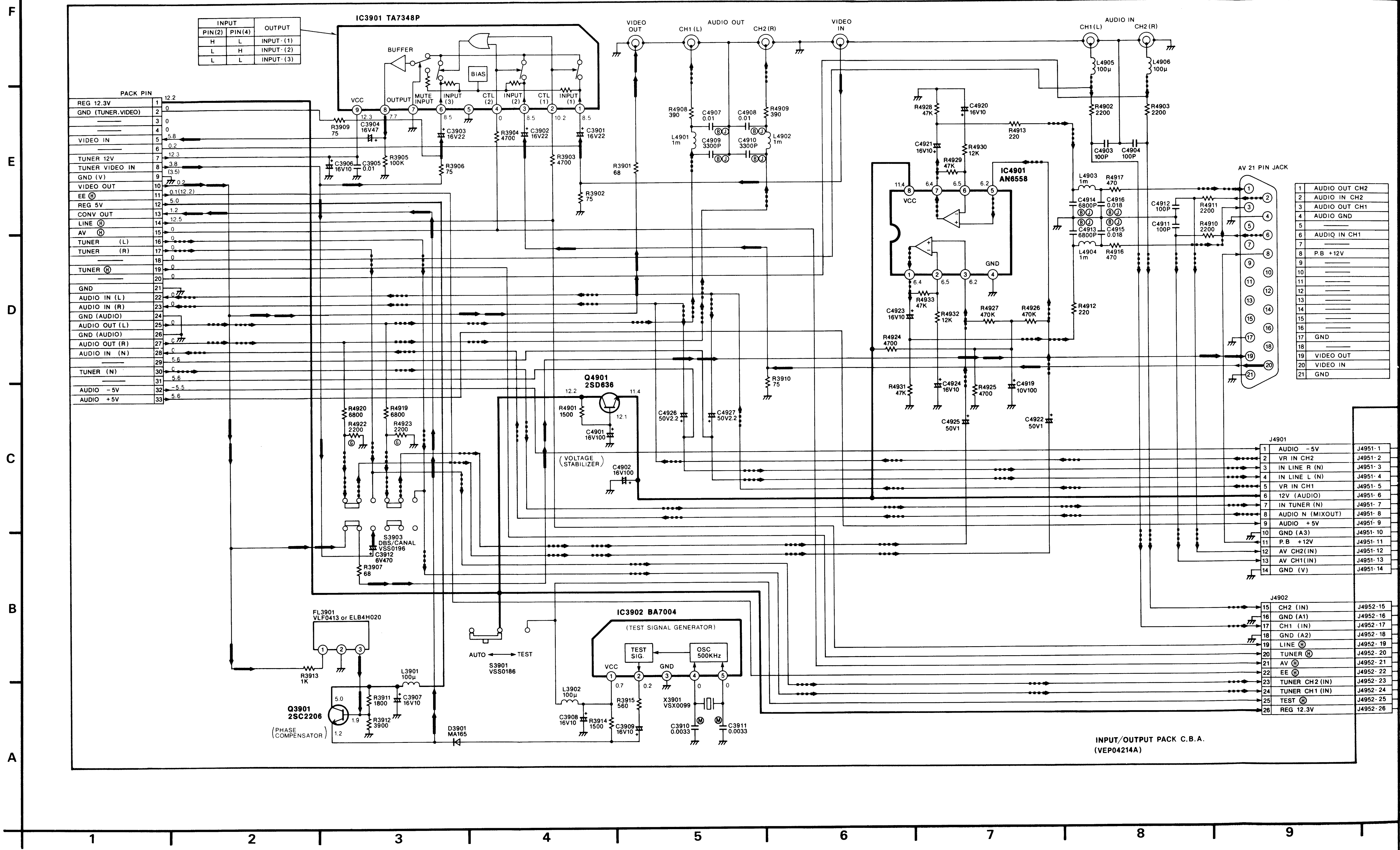
ADDRESS INFORMATION


SECAM PACK C.B.A. (VEP03452A)
FL851
C855
C854
T851
C853
C851
SECAM KILLER ADJ.
C852
R855
R858
R853
QR853
IC851
C858
R854
C856
R852
QR852
R856
R851
L851
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03402F)
D
C
B
A
1
2
3
4
5
6
7
FL301
L301
R301
R334
J1
C304
C305
L309
C325
C326
R306
R325
C324
L311
Q804
VR803
PB CHROMA LEVEL ADJ.
X801
C827
C828
R819
R820
L811
C835
J3
R816
L810
L310
L805
D301
R304
R307
R305
Q301
IC301
C352
C353
R339
C301
C302
C303
C306
R302
L302
C307
C308
C351
L307
C319
C349
L304
C316
C314
C317
L308
C320
C321
R317
R312
R311
R335
R303
C328
C327
C329
C338
R332
IC303
Q302
Q303
C332
C331
X301
R329
C336
C334
R326
C333
R833
IC801
C823
C824
C821
R818
C826
C820
R815
C815
L806
C818
J2
L809
C829
L808
L812
J4
C819
C817
R821
R822
J2
C310
R309
R308
FL302
R316
C322
R327
Q304
L306
C313
C311
R338
L303
C312
R310
C337
R330
C335
R328
FL303
C340
VR302
CCD GAIN ADJ.
DL802
R824
R823
J3A
C814
L804
FL801
C816
R814



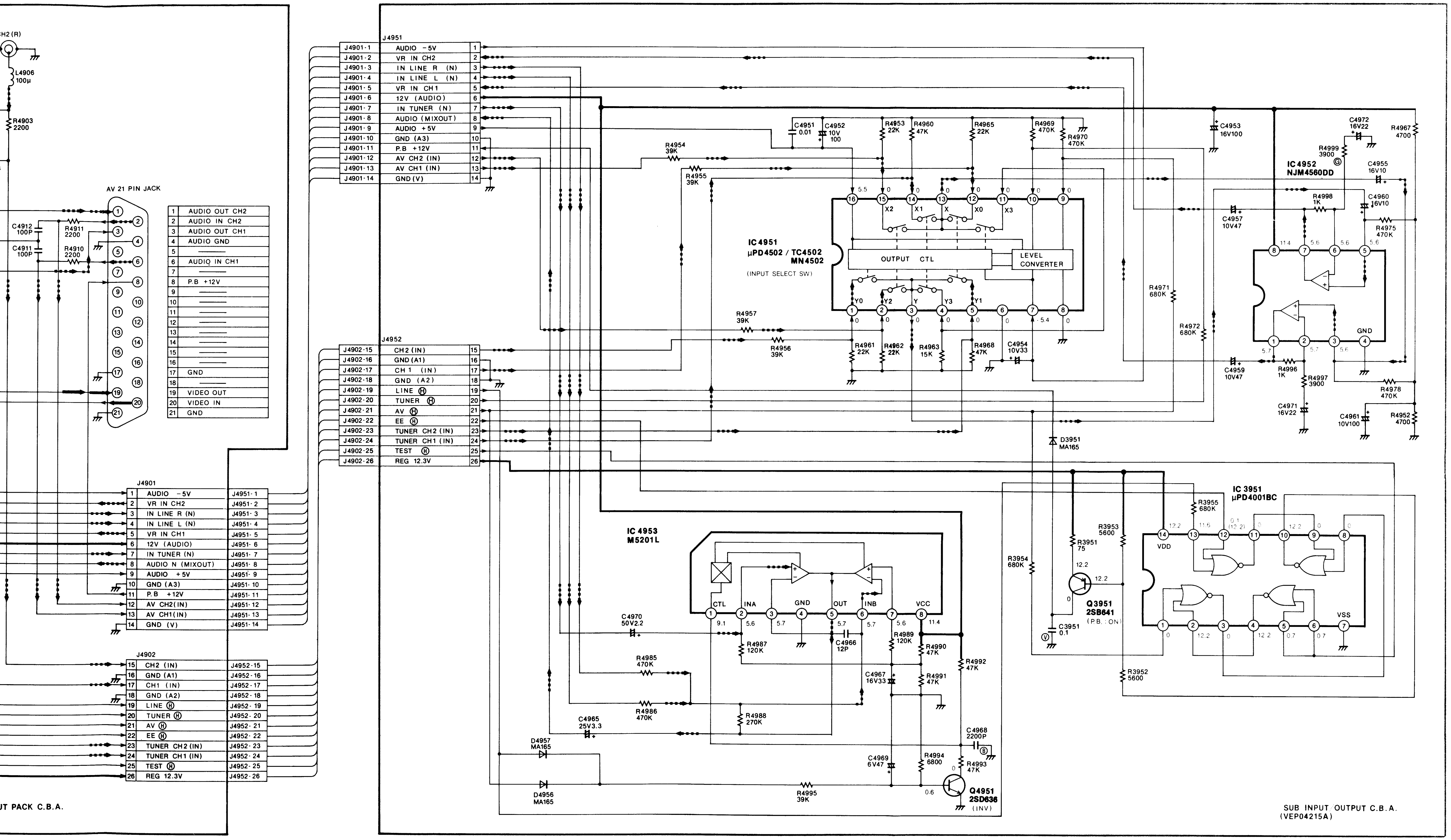
3-19. INPUT/OUTPUT PACK & SUB INPUT/OUTPUT SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE   VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE   AUDIO MAIN SIGNAL PATH IN REC MOD


F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
INPUT
PIN(2)
PIN(4)
OUTPUT
H L INPUT·(1)
L H INPUT·(2)
L L INPUT·(3)
IC3901 TA7348P
BUFFER
BIAS
VCC
OUTPUT
MUTE INPUT
INPUT (3)
CTL (2)
INPUT (2)
CTL (1)
INPUT (1)
PACK PIN
1 REG 12.3V
2 GND (TUNER.VIDEO)
3
4
5 VIDEO IN
6
7 TUNER 12V
8 TUNER VIDEO IN
9 GND (V)
10 VIDEO OUT
11 EE Ⓗ
12 REG 5V
13 CONV OUT
14 LINE Ⓗ
15 AV Ⓗ
16 TUNER (L)
17 TUNER (R)
18
19 TUNER Ⓗ
20
21 GND
22 AUDIO IN (L)
23 AUDIO IN (R)
24 GND (AUDIO)
25 AUDIO OUT (L)
26 GND (AUDIO)
27 AUDIO OUT (R)
28 AUDIO IN (N)
29
30 TUNER (N)
31
32 AUDIO -5V
33 AUDIO +5V
R3909 75
C3904 16V47
C3906 16V10
C3905 0.01
R3905 100K
C3903 16V22
R3906 75
R3904 4700
C3902 16V22
R3903 4700
C3901 16V22
R3902 75
R3901 68
VIDEO OUT
AUDIO OUT
CH1 (L)
CH2 (R)
VIDEO IN
R4908 390
C4907 0.01
C4908 0.01
R4909 390
L4901 1m
C4909 3300P
C4910 3300P
L4902 1m
R3910 75
C4926 50V2.2
C4927 50V2.2
Q4901 2SD636
R4901 1500
C4901 16V100
(VOLTAGE STABILIZER)
C4902 16V100
R4928 47K
C4920 16V10
C4921 16V10
R4929 47K
R4930 12K
R4913 220
IC4901 AN6558
VCC
GND
R4933 47K
C4923 16V10
R4932 12K
R4927 470K
R4926 470K
R4924 4700
R4931 47K
C4924 16V10
R4925 4700
C4919 10V100
C4925 50V1
C4922 50V1
R4912 220
AUDIO IN
CH1 (L)
CH2 (R)
L4905 100μ
L4906 100μ
R4902 2200
R4903 2200
C4903 100P
C4904 100P
L4903 1m
R4917 470
C4914 6800P
C4916 0.018
C4913 6800P
C4915 0.018
L4904 1m
R4916 470
C4912 100P
R4911 2200
C4911 100P
R4910 2200
AV 21 PIN JACK
1 AUDIO OUT CH2
2 AUDIO IN CH2
3 AUDIO OUT CH1
4 AUDIO GND
5
6 AUDIO IN CH1
7
8 P.B +12V
9
10
11
12
13
14
15
16
17 GND
18
19 VIDEO OUT
20 VIDEO IN
21 GND
R4920 6800
R4919 6800
R4922 2200
R4923 2200
S3903 DBS/CANAL VSS0196
C3912 6V470
R3907 68
J4901
1 AUDIO -5V J4951-1
2 VR IN CH2 J4951-2
3 IN LINE R (N) J4951-3
4 IN LINE L (N) J4951-4
5 VR IN CH1 J4951-5
6 12V (AUDIO) J4951-6
7 IN TUNER (N) J4951-7
8 AUDIO N (MIXOUT) J4951-8
9 AUDIO +5V J4951-9
10 GND (A3) J4951-10
11 P.B +12V J4951-11
12 AV CH2(IN) J4951-12
13 AV CH1(IN) J4951-13
14 GND (V) J4951-14
J4902
15 CH2 (IN) J4952-15
16 GND (A1) J4952-16
17 CH1 (IN) J4952-17
18 GND (A2) J4952-18
19 LINE Ⓗ J4952-19
20 TUNER Ⓗ J4952-20
21 AV Ⓗ J4952-21
22 EE Ⓗ J4952-22
23 TUNER CH2 (IN) J4952-23
24 TUNER CH1 (IN) J4952-24
25 TEST Ⓗ J4952-25
26 REG 12.3V J4952-26
FL3901 VLF0413 or ELB4H020
R3913 1K
L3901 100μ
Q3901 2SC2206
(PHASE COMPENSATOR)
R3911 1800
C3907 16V10
R3912 3900
D3901 MA165
AUTO TEST
S3901 VSS0186
IC3902 BA7004
(TEST SIGNAL GENERATOR)
TEST SIG.
OSC 500KHz
VCC
GND
L3902 100μ
C3908 16V10
R3914 1500
R3915 560
C3909 16V10
X3901 VSX0099
C3910 0.0033
C3911 0.0033
INPUT/OUTPUT PACK C.B.A.
(VEP04214A)

Back Page:
LUMINANCE & CHROMINANCE Section

UDIO MAIN SIGNAL PATH IN REC MODE ◀■■■ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



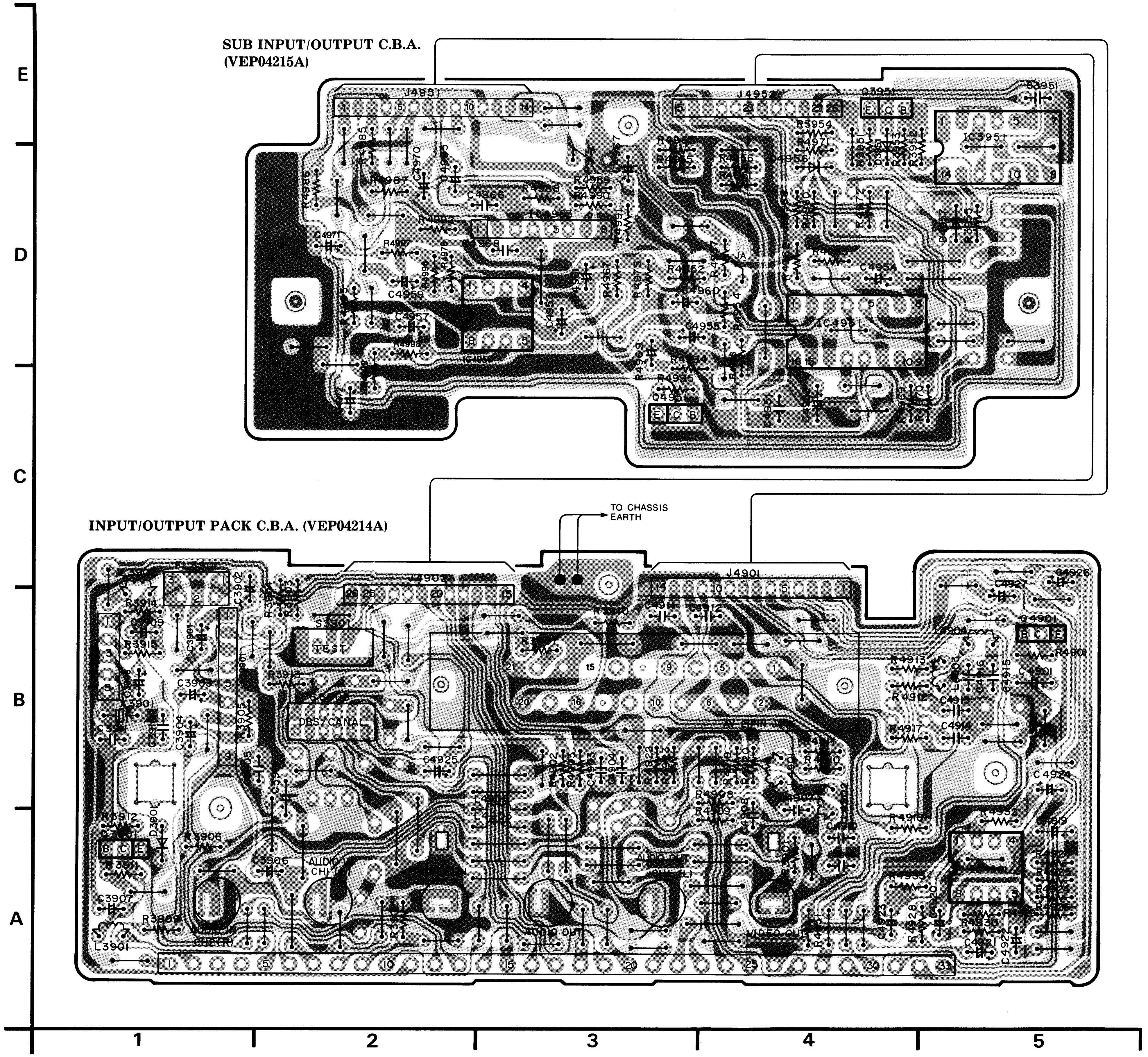
H2 (R)
L4906
100µ
R4903
2200
AV 21 PIN JACK
C4912
100P
C4911
100P
R4911
2200
R4910
2200
1 AUDIO OUT CH2
2 AUDIO IN CH2
3 AUDIO OUT CH1
4 AUDIO GND
6 AUDIO IN CH1
8 P.B +12V
17 GND
19 VIDEO OUT
20 VIDEO IN
21 GND
J4901
1 AUDIO -5V
2 VR IN CH2
3 IN LINE R (N)
4 IN LINE L (N)
5 VR IN CH1
6 12V (AUDIO)
7 IN TUNER (N)
8 AUDIO N (MIXOUT)
9 AUDIO +5V
10 GND (A3)
11 P.B +12V
12 AV CH2(IN)
13 AV CH1(IN)
14 GND (V)
J4951-1
J4951-2
J4951-3
J4951-4
J4951-5
J4951-6
J4951-7
J4951-8
J4951-9
J4951-10
J4951-11
J4951-12
J4951-13
J4951-14
J4902
15 CH2 (IN)
16 GND (A1)
17 CH1 (IN)
18 GND (A2)
19 LINE Ⓗ
20 TUNER Ⓗ
21 AV Ⓗ
22 EE Ⓗ
23 TUNER CH2 (IN)
24 TUNER CH1 (IN)
25 TEST Ⓗ
26 REG 12.3V
J4952-15
J4952-16
J4952-17
J4952-18
J4952-19
J4952-20
J4952-21
J4952-22
J4952-23
J4952-24
J4952-25
J4952-26
UT PACK C.B.A.
J4951
J4901-1 AUDIO -5V 1
J4901-2 VR IN CH2 2
J4901-3 IN LINE R (N) 3
J4901-4 IN LINE L (N) 4
J4901-5 VR IN CH1 5
J4901-6 12V (AUDIO) 6
J4901-7 IN TUNER (N) 7
J4901-8 AUDIO (MIXOUT) 8
J4901-9 AUDIO +5V 9
J4901-10 GND (A3) 10
J4901-11 P.B +12V 11
J4901-12 AV CH2 (IN) 12
J4901-13 AV CH1 (IN) 13
J4901-14 GND (V) 14
J4952
J4902-15 CH2 (IN) 15
J4902-16 GND (A1) 16
J4902-17 CH 1 (IN) 17
J4902-18 GND (A2) 18
J4902-19 LINE Ⓗ 19
J4902-20 TUNER Ⓗ 20
J4902-21 AV Ⓗ 21
J4902-22 EE Ⓗ 22
J4902-23 TUNER CH2 (IN) 23
J4902-24 TUNER CH1 (IN) 24
J4902-25 TEST Ⓗ 25
J4902-26 REG 12.3V 26
R4954
39K
R4955
39K
C4951
0.01
C4952
10V
100
R4953
22K
R4960
47K
R4965
22K
R4969
470K
R4970
470K
IC4951
µPD4502 / TC4502
MN4502
(INPUT SELECT SW)
X2 X1 X X0 X3
OUTPUT CTL
LEVEL
CONVERTER
Y0 Y2 Y Y3 Y1
R4957
39K
R4956
39K
R4961
22K
R4962
22K
R4963
15K
R4968
47K
C4954
10V33
D3951
MA165
R4971
680K
R4972
680K
C4953
16V100
C4957
10V47
C4959
10V47
R4996
1K
R4997
3900
C4971
16V22
C4972
16V22
R4999
3900
IC4952
NJM4560DD
R4998
1K
C4955
16V10
C4960
16V10
R4975
470K
R4967
4700
R4978
470K
C4961
10V100
R4952
4700
GND
IC4953
M5201L
CTL INA GND OUT INB VCC
C4970
50V2.2
R4987
120K
C4966
12P
R4989
120K
R4990
47K
R4991
47K
R4992
47K
C4967
16V33
R4985
470K
R4986
470K
R4988
270K
C4965
25V3.3
D4957
MA165
D4956
MA165
C4968
2200P
C4969
6V47
R4994
6800
R4993
47K
R4995
39K
Q4951
2SD636
(INV)
IC3951
µPD4001BC
R3955
680K
R3953
5600
R3951
75
R3954
680K
Q3951
2SB641
(P.B.: ON)
C3951
0.1
R3952
5600
VDD
VSS
SUB INPUT OUTPUT C.B.A.
(VEP04215A)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

9 10 11 12 13 14 15 16 17

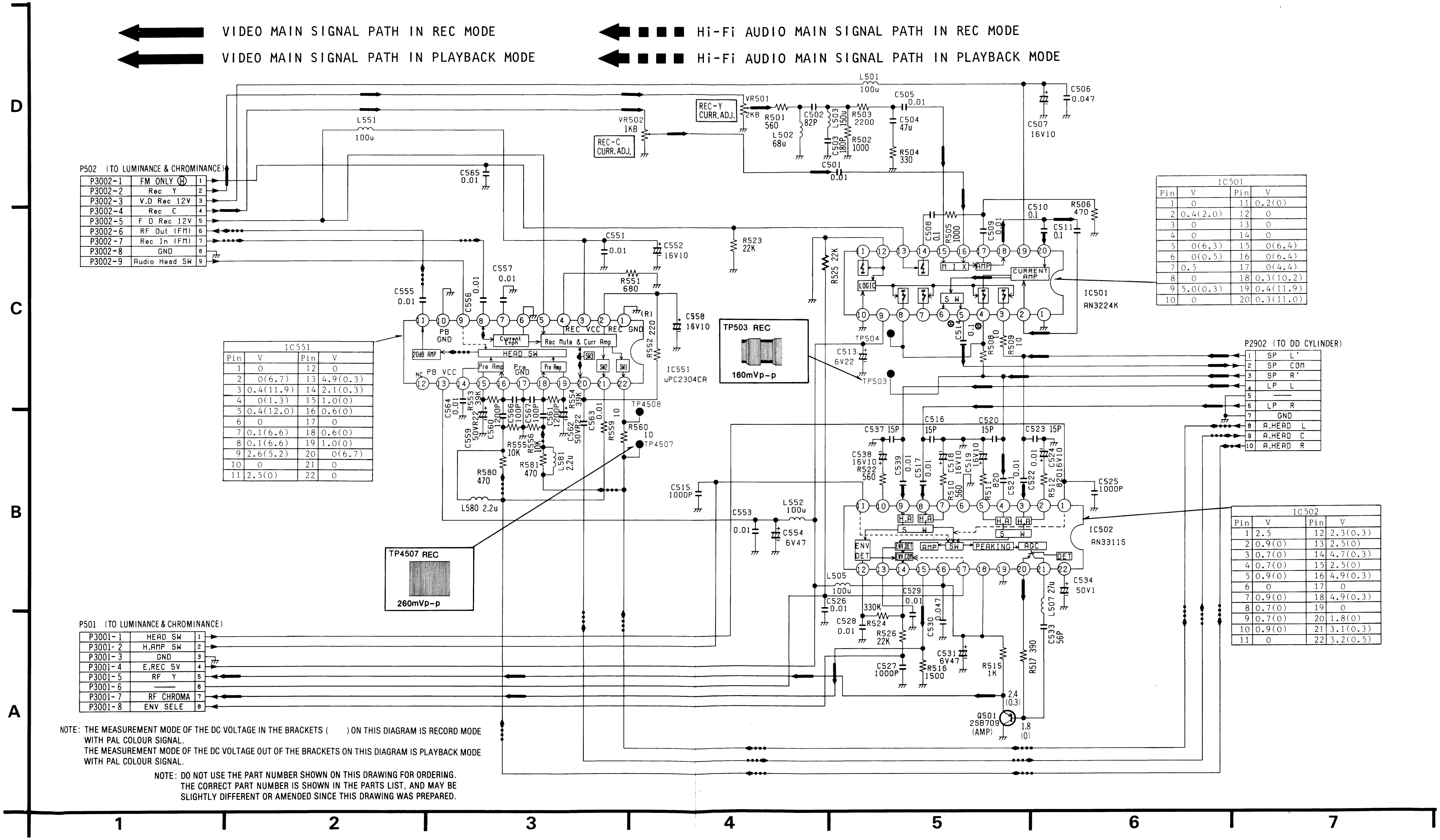
3-20. INPUT/OUTPUT PACK C.B.A. (VEP04214A) & SUB INPUT/OUTPUT C.B.A. (VEP04215A)


SUB INPUT/OUTPUT C.B.A.
(VEP04215A)
INPUT/OUTPUT PACK C.B.A. (VEP04214A)
TO CHASSIS EARTH
J4951
J4952
Q3951
C3951
IC3951
IC4953
IC4951
Q4951
J4902
J4901
S3901
TEST
DBS/CANAL
AV 8PIN JACK
AUDIO OUT
VIDEO OUT
Q3901
Q4901
IC4901
C4925
L3901
FL3901
E
D
C
B
A
1
2
3
4
5

INPUT/OUTPUT PACK C.B.A. & SUB INPUT/OUTPUT C.B.A.	
Transistor	
Q3901	A-1
Q3951	C-3
Q4901	B-5
Q4951	E-4
Integrated Circuit	
IC3901	B-1
IC3902	B-1
IC3951	E-5
IC4901	A-5
IC4925	D-3
IC4951	D-4
IC4953	D-3

ADDRESS INFORMATION

3-21. HEAD AMP SCHEMATIC DIAGRAM


VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
Hi-Fi AUDIO MAIN SIGNAL PATH IN REC MODE
Hi-Fi AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
D
C
B
A
1
2
3
4
5
6
7
L501 100u
C506 0.047
C507 16V10
C505 0.01
VR501 2KB
REC-Y CURR.ADJ.
R501 560
C502 82P
L503 150u
R503 2200
C504 47u
L502 68u
C503 180P
R502 1000
R504 330
C501 0.01
VR502 1KB
REC-C CURR.ADJ.
L551 100u
C565 0.01
C551 0.01
C552 16V10
R523 22K
R551 680
C557 0.01
C555 0.01
C556 0.01
C558 16V10
R552 220
PB GND
REC VCC
REC GND
Current Emph
Rec Mute & Curr Amp
HEAD SW
20dB AMP
Pre Amp
Pre GND
PB VCC
NC
SW1
SW2
SW3
IC551 uPC2304CA
C564 0.01
R553 39K
C560 120P
C559 50VR22
C566 100P
R555 10K
R556 10K
C567 100P
C561 120P
R554 39K
C562 50VR22
C563 0.01
R559 10
R560 10
TP4508
TP4507
R580 470
R581 470
L581 2.2u
L580 2.2u
TP503 REC
160mVp-p
TP4507 REC
260mVp-p
R525 22K
C508 0.1
R505 1000
C509 0.01
C510 0.1
R506 470
C511 0.1
M I X
AMP
CURRENT AMP
LOGIC
S W
IC501 AN3224K
C513 6V22
TP504
TP503
C514 0.1
R508 10
R509 10
C515 1000P
C553 0.01
L552 100u
C554 6V47
C537 15P
C516 15P
C520 15P
C523 15P
C538 16V10
R522 560
C539 0.01
C517 0.01
C518 16V10
R510 560
C519 16V10
R511 820
C521 0.01
C522 0.01
C524 16V10
R512 820
C525 1000P
H.A
S W
ENV DET
ENV DET
ENV COM
AMP
SW
PEAKING
AGC
DET
IC502 AN3311S
L505 100u
C526 0.01
R524 330K
C528 0.01
R526 22K
C529 0.01
C530 0.047
C531 6V47
C527 1000P
R516 1500
R515 1K
R517 390
L507 27u
C533 56P
C534 50V1
Q501 2SB709 (AMP)
2.4 (0.3)
1.8 (0)

P502 (TO LUMINANCE & CHROMINANCE)

P3002-1	FM ONLY Ⓗ	1
P3002-2	Rec Y	2
P3002-3	V.D Rec 12V	3
P3002-4	Rec C	4
P3002-5	F D Rec 12V	5
P3002-6	RF Out (FM)	6
P3002-7	Rec In (FM)	7
P3002-8	GND	8
P3002-9	Audio Head SW	9

P501 (TO LUMINANCE & CHROMINANCE)

P3001-1	HEAD SW	1
P3001-2	H.AMP SW	2
P3001-3	GND	3
P3001-4	E.REC 5V	4
P3001-5	RF Y	5
P3001-6	——	6
P3001-7	RF CHROMA	7
P3001-8	ENV SELE	8

P2902 (TO DD CYLINDER)

1	SP L'
2	SP COM
3	SP R'
4	LP L
5	——
6	LP R
7	GND
8	A.HEAD L
9	A.HEAD C
10	A.HEAD R

IC501			
Pin	V	Pin	V
1	0	11	0.2(0)
2	0.4(2.0)	12	0
3	0	13	0
4	0	14	0
5	0(6.3)	15	0(6.4)
6	0(0.5)	16	0(6.4)
7	0.5	17	0(4.4)
8	0	18	0.3(10.2)
9	5.0(0.3)	19	0.4(11.9)
10	0	20	0.3(11.0)

IC551			
Pin	V	Pin	V
1	0	12	0
2	0(6.7)	13	4.9(0.3)
3	0.4(11.9)	14	2.1(0.3)
4	0(1.3)	15	1.0(0)
5	0.4(12.0)	16	0.6(0)
6	0	17	0
7	0.1(6.6)	18	0.6(0)
8	0.1(6.6)	19	1.0(0)
9	2.6(5.2)	20	0(6.7)
10	0	21	0
11	2.5(0)	22	0

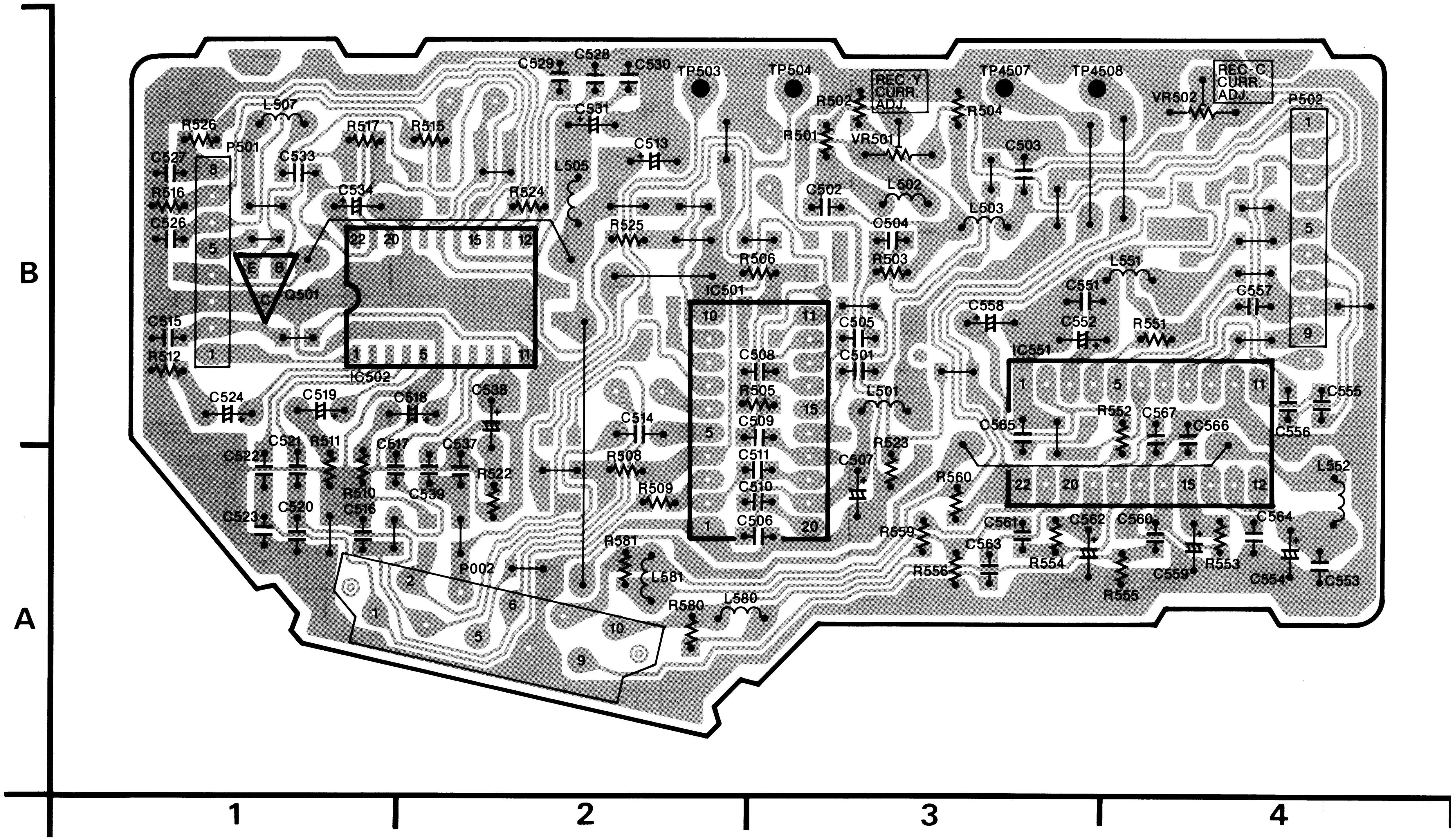
IC502			
Pin	V	Pin	V
1	2.5	12	2.3(0.3)
2	0.9(0)	13	2.5(0)
3	0.7(0)	14	4.7(0.3)
4	0.7(0)	15	2.5(0)
5	0.9(0)	16	4.9(0.3)
6	0	17	0
7	0.9(0)	18	4.9(0.3)
8	0.7(0)	19	0
9	0.7(0)	20	1.8(0)
10	0.9(0)	21	3.1(0.3)
11	0	22	3.2(0.5)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Back Page:
INPUT/OUTPUT Section

3-22. HEAD AMP C.B.A. (VEP05113B)

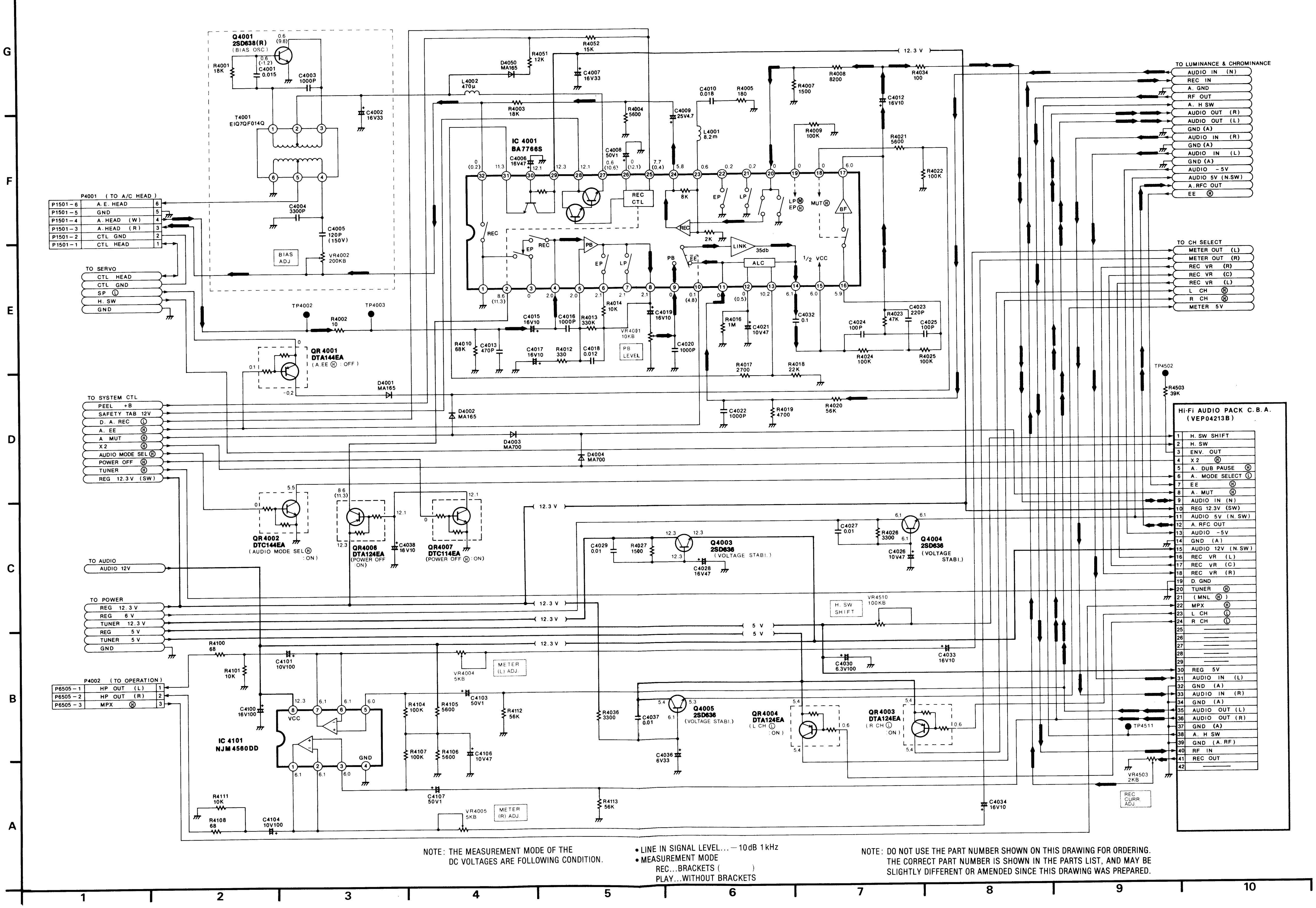

C529
C528
C530
TP503
TP504
REC-Y CURR. ADJ.
TP4507
TP4508
REC-C CURR. ADJ.
VR502
P502
R526
L507
R517
R515
C531
C513
L505
R502
R504
R501
VR501
C503
C527
P501
C533
C534
R524
C502
L502
R516
C526
R525
L503
C504
R506
R503
L551
IC502
Q501
E
B
C
IC501
C551
C558
C552
C557
R551
C515
R512
C505
C501
IC551
C508
R505
C509
C511
C510
C506
C524
C519
C518
C538
C514
R508
R509
L501
C507
R523
C555
C556
R552
C567
C566
C565
C522
C521
R511
C517
C537
R522
R510
C539
C523
C520
C516
R560
L552
R559
C561
C562
C560
C564
C563
R556
R554
R555
C559
R553
C554
C553
R581
L581
P002
R580
L580
B
A
1
2
3
4

HEAD AMP C.B.A.	
Transistor	
Q501	B-1
Integrated Circuit	
IC501 IC502 IC551	B-2 B-1 B-3
Test Point	
TP503 TP504 TP4507 TP4508	B-2 B-2 B-3 B-3
Adjustment	
VR501 VR502	B-3 B-4
Connector	
P002 P501 P502	A-2 B-1 B-4

ADDRESS INFORMATION

3-23. AUDIO SCHEMATIC DIAGRAM

◀ MAIN SIGNAL PATH IN REC MODE ◀ MAIN SIGNAL PATH IN PLAYBACK MODE



Q4001 2SD638(R) (BIAS OSC)
T4001 EIQ7QF014Q
BIAS ADJ
VR4002 200KB
IC 4001 BA7766S
REC CTL
PB
LINK
35db
ALC
1/2 VCC
BF
MUT Ⓗ
VR4001 10KB
PB LEVEL
TP4002
TP4003
QR 4001 DTA144EA (A.EE Ⓗ : OFF)
D4001 MA165
D4002 MA165
D4003 MA700
D4004 MA700
QR4002 DTC144EA (AUDIO MODE SEL Ⓗ : ON)
QR4006 DTA124EA (POWER OFF ON)
QR4007 DTC114EA (POWER OFF Ⓗ : ON)
Q4003 2SD636 (VOLTAGE STABI.)
Q4004 2SD636 (VOLTAGE STABI.)
Q4005 2SD636 (VOLTAGE STABI.)
QR4004 DTA124EA (L CH Ⓛ : ON)
QR4003 DTA124EA (R CH Ⓛ : ON)
IC 4101 NJM4560DD
VR4004 5KB METER (L) ADJ
VR4005 5KB METER (R) ADJ
VR4510 100KB H. SW SHIFT
VR4503 2KB REC CURR ADJ
TP4502
TP4511
P4001 (TO A/C HEAD)
P1501-6 A.E. HEAD
P1501-5 GND
P1501-4 A. HEAD (W)
P1501-3 A.HEAD (R)
P1501-2 CTL GND
P1501-1 CTL HEAD
TO SERVO
CTL HEAD
CTL GND
SP Ⓛ
H. SW
GND
TO SYSTEM CTL
PEEL +B
SAFETY TAB 12V
D. A. REC Ⓛ
A. EE Ⓗ
A MUT Ⓗ
X2 Ⓗ
AUDIO MODE SEL Ⓗ
POWER OFF Ⓗ
TUNER Ⓗ
REG 12.3V (SW)
TO AUDIO
AUDIO 12V
TO POWER
REG 12.3V
REG 6V
TUNER 12.3V
REG 5V
TUNER 5V
GND
P4002 (TO OPERATION)
P6505-1 HP OUT (L)
P6505-2 HP OUT (R)
P6505-3 MPX Ⓗ
TO LUMINANCE & CHROMINANCE
AUDIO IN (N)
REC IN
A. GND
RF OUT
A. H SW
AUDIO OUT (R)
AUDIO OUT (L)
GND (A)
AUDIO IN (R)
GND (A)
AUDIO IN (L)
GND (A)
AUDIO -5V
AUDIO 5V (N.SW)
A. RFC OUT
EE Ⓗ
TO CH SELECT
METER OUT (L)
METER OUT (R)
REC VR (R)
REC VR (C)
REC VR (L)
L CH Ⓗ
R CH Ⓗ
METER 5V
Hi-Fi AUDIO PACK C.B.A. (VEP04213B)
1 H. SW SHIFT
2 H. SW
3 ENV. OUT
4 X2 Ⓗ
5 A. DUB PAUSE Ⓗ
6 A. MODE SELECT Ⓛ
7 EE Ⓗ
8 A. MUT Ⓗ
9 AUDIO IN (N)
10 REG 12.3V (SW)
11 AUDIO 5V (N.SW)
12 A. RFC OUT
13 AUDIO -5V
14 GND (A)
15 AUDIO 12V (N.SW)
16 REC VR (L)
17 REC VR (C)
18 REC VR (R)
19 D. GND
20 TUNER Ⓗ
21 (MNL Ⓗ)
22 MPX Ⓗ
23 L CH Ⓛ
24 R CH Ⓛ
30 REG 5V
31 AUDIO IN (L)
32 GND (A)
33 AUDIO IN (R)
34 GND (A)
35 AUDIO OUT (L)
36 AUDIO OUT (R)
37 GND (A)
38 A. H SW
39 GND (A. RF)
40 RF IN
41 REC OUT
12.3 V
5 V
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

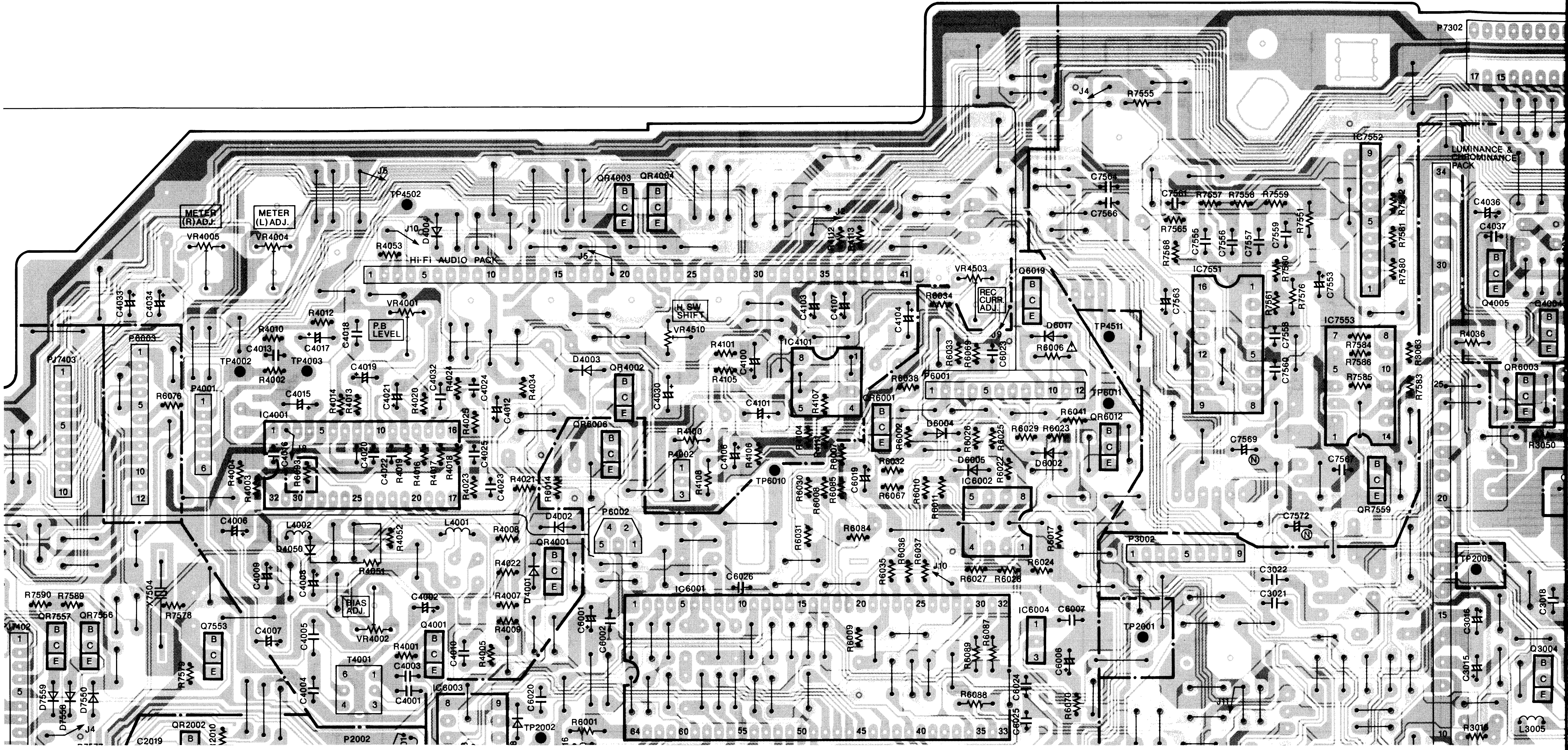
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGES ARE FOLLOWING CONDITION.

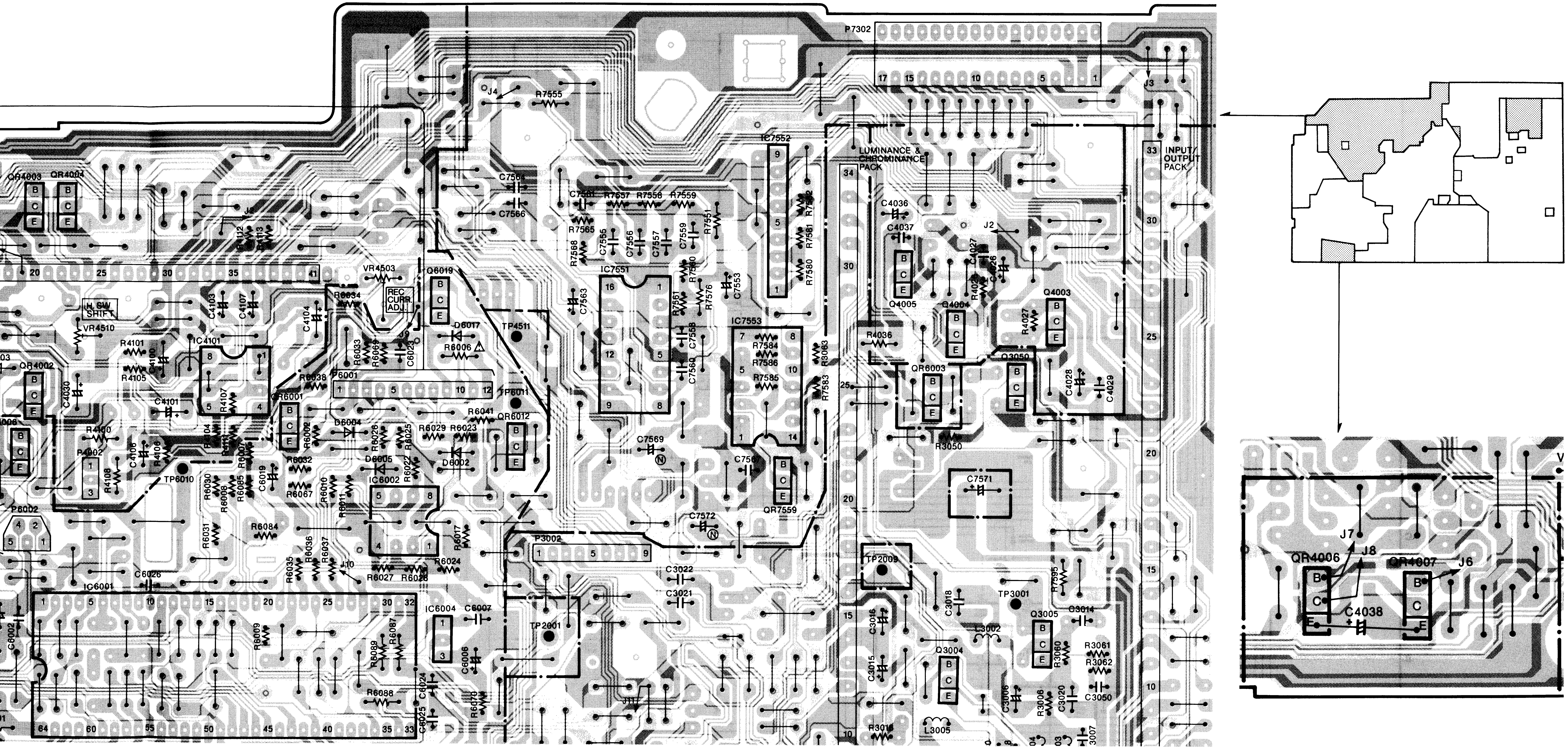
- LINE IN SIGNAL LEVEL…−10dB 1kHz
- MEASUREMENT MODE
  REC…BRACKETS ( )
  PLAY…WITHOUT BRACKETS

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Back Page:
HEAD AMP Section

3-24. AUDIO Section In Main C.B.A. (VEP03472B)


METER (R) ADJ.
METER (L) ADJ.
VR4005
VR4004
TP4502
J5
J10
D4004
R4053
Hi-Fi AUDIO PACK
QR4003
QR4004
VR4001
P.B LEVEL
R4012
R4010
C4013
C4017
C4018
TP4002
TP4003
R4002
C4019
C4033
C4034
PJ7403
P6003
P4001
R6076
C4015
IC4001
R4014
R4013
C4021
R4020
C4032
R4024
C4024
C4012
R4034
R4025
C4020
C4022
R4019
R4016
R4017
R4018
R4023
C4023
R4021
R6014
R4004
R4003
C4016
R6083
C4006
L4002
D4050
R4052
L4001
R4008
D4002
QR4001
R4022
R4051
C4009
C4008
BIAS ADJ.
VR4002
C4002
R4007
D4001
R4009
Q4001
R4001
C4003
C4001
C4010
R4005
T4001
IC6003
C4007
C4005
C4004
Q7553
X7504
R7578
R7590
R7589
QR7557
QR7556
D7559
D7556
D7550
J4
QR2002
C2019
P2002
C6020
TP2002
R6001
D4003
QR4002
QR6006
C4030
H.SW SHIFT
VR4510
R4101
R4105
C4100
C4101
IC4101
R4107
C4103
C4107
C4104
R4400
R4002
R4109
C4106
R4106
TP6010
R6004
R6007
R6030
R6008
R6085
C6019
R6031
R6084
R6036
R6035
R6037
J10
C6026
IC6001
C6001
C6002
R6009
VR4503
R6034
REC CURR. ADJ.
R6033
R6069
C6027
J9
R6038
P6001
QR6001
R6002
D6004
R6026
R6025
R6032
R6067
R6010
R6011
D6005
IC6002
R6022
R6027
R6028
R6024
R6087
R6089
R6088
IC6004
C6007
C6008
C6024
C6025
R6070
Q6019
D6017
R6006
TP4511
TP6011
R6041
R6029
R6023
QR6012
D6002
R6017
P3002
TP2001
J11
J4
R7555
C7564
C7566
C7561
R7557
R7558
R7559
R7565
R7566
C7555
C7556
C7557
C7559
R7551
R7560
R7576
C7553
C7563
IC7551
R7561
C7558
C7560
C7569
IC7553
R7584
R7586
R7585
C7567
QR7559
C7572
C3022
C3021
IC7552
R7582
R7581
R7580
R8063
R7583
LUMINANCE & CHROMINANCE PACK
P7302
C4036
C4037
Q4005
Q4004
R4036
QR6003
R3050
TP2009
C3018
C3016
C3015
Q3004
R3016
L3005
J7402

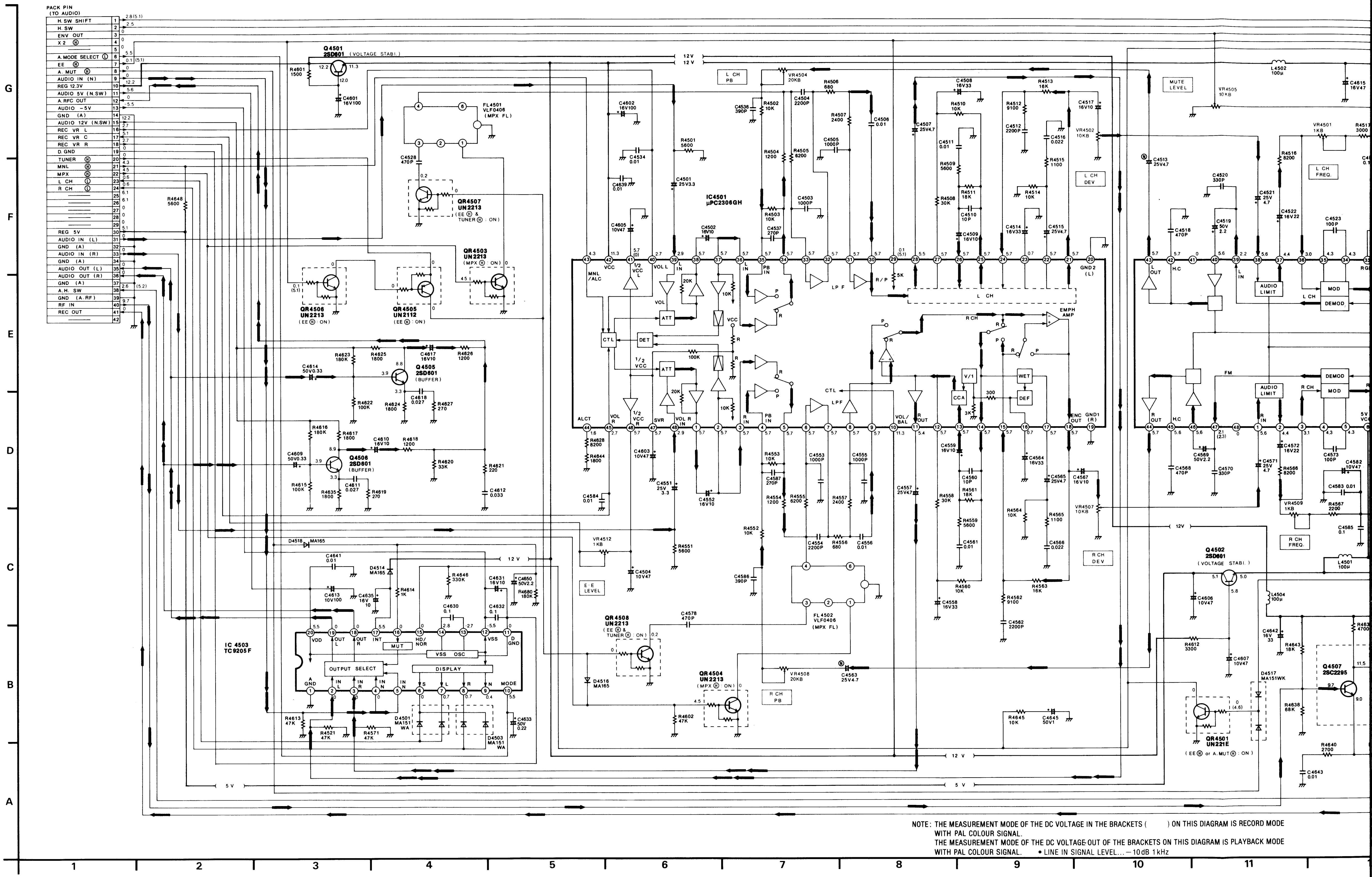

P7302
17
15
10
5
1
J3
J4
R7555
IC7552
LUMINANCE & CHROMINANCE PACK
INPUT/ OUTPUT PACK
33
34
30
25
20
15
10
QR4003
QR4004
QR4002
QR4006
QR4007
C7564
C7566
C7561
R7557
R7558
R7559
R7565
R7566
C7556
C7557
C7559
R7551
R7580
R7581
IC7551
IC7553
R7584
R7586
R7585
R7583
R3063
C7553
C7563
C7558
C7560
R7576
C7569
C7567
QR7559
C7571
C7572
P3002
C3022
C3021
TP2009
TP2001
TP3001
TP4511
TP6011
TP6010
VR4503
REC CURR. ADJ.
H. SW SHIFT
VR4510
Q6019
R6034
D6017
R6006
IC4101
R4101
R4105
C4101
C4103
C4107
C4104
C4100
C4030
R4107
R4112
R4113
P6001
QR6001
QR6012
R6038
R6041
R6029
R6023
D6004
D6005
D6002
IC6002
R6032
R6067
R6030
R6031
R6084
R6035
R6036
R6037
J10
R6027
R6028
R6024
R6017
C6026
IC6001
IC6004
C6007
C6006
C6024
C6025
R6088
R6089
R6087
R6009
R6070
J11
C6002
P6002
R4400
R4402
R4106
R4108
C4106
C4036
C4037
J2
Q4005
Q4004
Q4003
R4027
C4027
R4036
QR6003
Q3050
C4028
C4029
R3050
Q3005
C3014
C3016
C3015
C3018
L3002
Q3004
R3060
R3061
R3062
C3050
R3006
C3006
C3020
L3005
R3010
R7595
J7
J8
J6
C4038
B
C
E

Next Page:
Hi-Fi AUDIO Section

3-25. Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MO

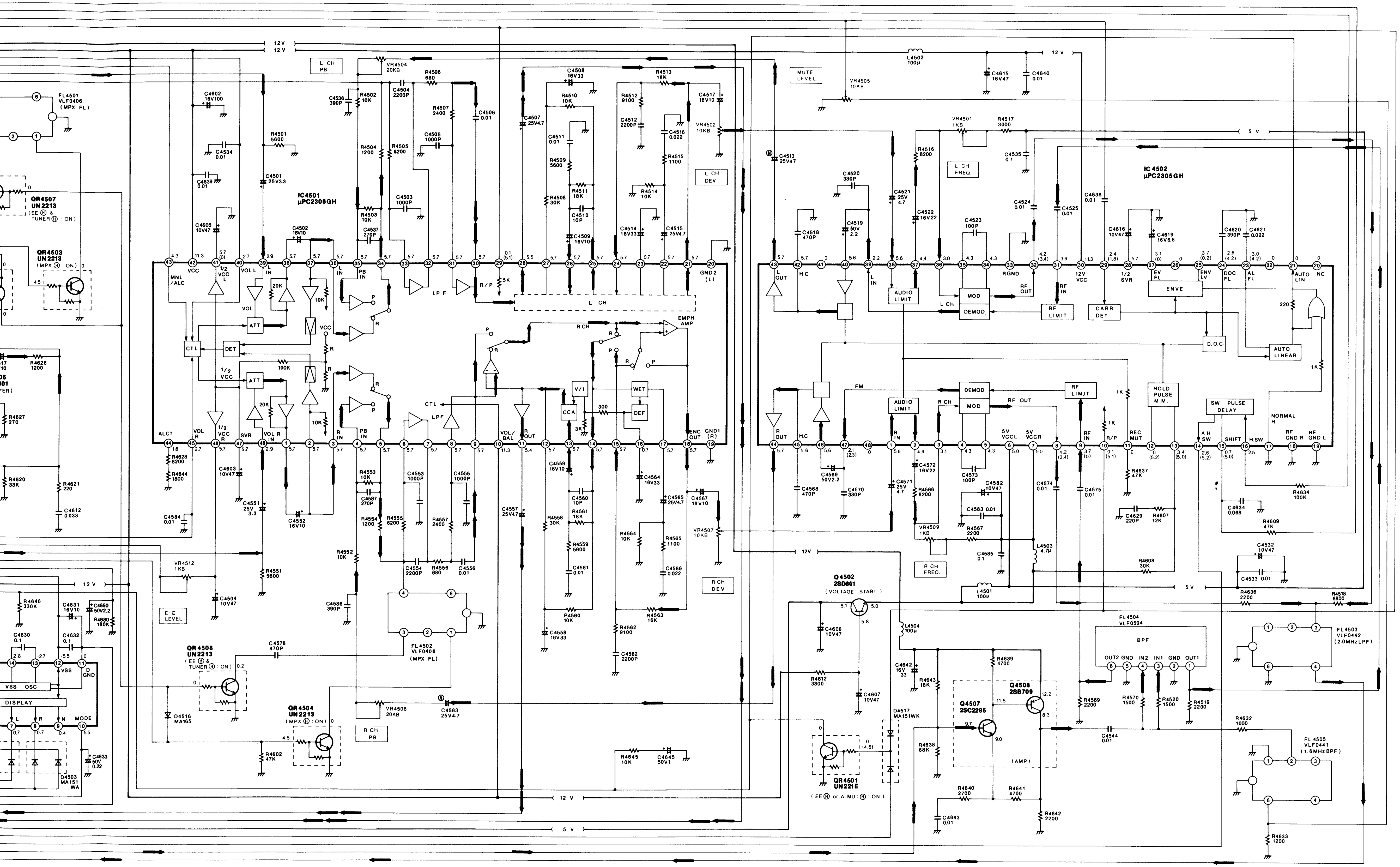

PACK PIN (TO AUDIO)
1 H. SW SHIFT 2.8 (5.1)
2 H. SW 2.5
3 ENV OUT 0
4 X 2 Ⓗ 0
5 0
6 A. MODE SELECT Ⓛ 5.5
7 EE Ⓗ 0.1 (5.1)
8 A. MUT Ⓗ 0
9 AUDIO IN (N) 0
10 REG 12.3V 12.2
11 AUDIO 5V (N.SW) 5.6
12 A. RFC OUT 0
13 AUDIO −5V −5.5
14 GND (A)
15 AUDIO 12V (N.SW) 12.2
16 REC VR L 2.7
17 REC VR C 5.1
18 REC VR R 2.7
19 D. GND 0
20 TUNER Ⓗ 0
21 MNL Ⓗ 4.3
22 MPX Ⓗ 4.5
23 L CH Ⓛ 0.6
24 R CH Ⓛ 0.6
25 6.1
26 6.1
27 0
28 0
29 0
30 REG 5V 5.1
31 AUDIO IN (L) 0
32 GND (A)
33 AUDIO IN (R) 0
34 GND (A)
35 AUDIO OUT (L) 0
36 AUDIO OUT (R) 0
37 GND (A)
38 A.H. SW 2.6 (5.2)
39 GND (A.RF)
40 RF IN 9.7
41 REC OUT 0
42
Q4501 2SD601 (VOLTAGE STABI.)
R4601 1500
C4601 16V100
FL4501 VLF0406 (MPX FL)
C4528 470P
QR4507 UN2213 (EE Ⓗ & TUNER Ⓗ : ON)
QR4503 UN2213 (MPX Ⓗ : ON)
QR4506 UN2213 (EE Ⓗ : ON)
QR4505 UN2112 (EE Ⓗ : ON)
R4648 5600
Q4505 2SD601 (BUFFER)
Q4506 2SD601 (BUFFER)
IC 4503 TC9205F
OUTPUT SELECT
DISPLAY
VSS OSC
MUT
D4518 MA165
D4514 MA165
D4501 MA151 WA
D4503 MA151 WA
IC4501 µPC2306GH
L CH PB
R CH PB
VR4504 20KB
VR4508 20KB
L CH DEV
R CH DEV
E-E LEVEL
MUTE LEVEL
L CH FREQ.
R CH FREQ.
VR4512 1KB
FL4502 VLF0406 (MPX FL)
QR4508 UN2213 (EE Ⓗ & TUNER Ⓗ : ON)
QR4504 UN2213 (MPX Ⓗ : ON)
Q4502 2SD601 (VOLTAGE STABI.)
QR4501 UN221E (EE Ⓗ or A. MUT Ⓗ : ON)
Q4507 2SC2295
D4517 MA151WK
D4516 MA165
L4501 100µ
L4502 100µ
L4504 100µ
VR4501 1KB
VR4502 10KB
VR4505 10KB
VR4507 10KB
VR4509 1KB
AUDIO LIMIT
MOD
DEMOD
EMPH AMP
L CH
R CH
CTL
DET
ATT
LPF
CCA
WET
DEF
12 V
5 V
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. • LINE IN SIGNAL LEVEL… −10dB 1kHz

AM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

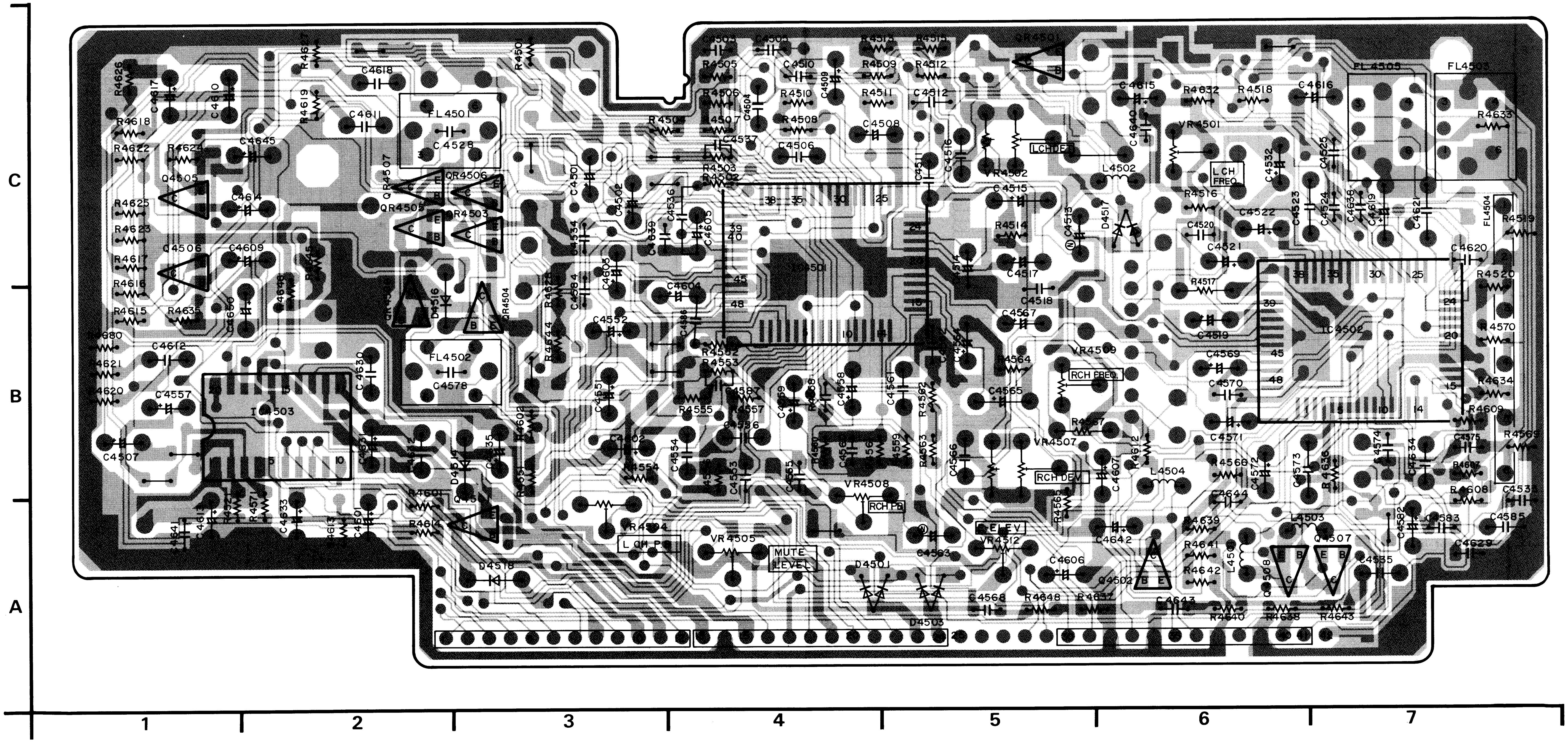

IC4501
µPC2306GH
IC4502
µPC2305GH
FL4501
VLF0406
(MPX FL)
FL4502
VLF0406
(MPX FL)
FL4503
VLF0442
(2.0MHz LPF)
FL4504
VLF0594
BPF
FL4505
VLF0441
(1.6MHz BPF)
QR4507
UN2213
QR4503
UN2213
QR4508
UN2213
QR4504
UN2213
Q4502
2SD601
(VOLTAGE STABI.)
Q4507
2SC2295
Q4508
2SB709
(AMP)
QR4501
UN221E
(EE Ⓡ or A.MUT Ⓡ : ON)
D4516
MA165
D4517
MA151WK
D4503
MA151WA
L CH PB
R CH PB
L CH DEV
R CH DEV
L CH FREQ
R CH FREQ
MUTE LEVEL
E-E LEVEL
VR4501
VR4502
VR4504
VR4505
VR4507
VR4508
VR4509
VR4512
L CH
R CH
MNL/ALC
ALCT
VCC
1/2 VCC
VOL L
VOL R
L IN
R IN
PB IN
LPF
R/P
CTL
DET
ATT
EMPH AMP
V/1
CCA
WET
DEF
ENC OUT
GND1 (R)
GND2 (L)
VOL/BAL
AUDIO LIMIT
MOD
DEMOD
RF LIMIT
CARR DET
ENVE
D.O.C.
AUTO LINEAR
HOLD PULSE M.M.
SW PULSE DELAY
RF OUT
REC MUT
NORMAL
SHIFT
H.SW
A.H SW
12 V
5 V
VSS OSC
DISPLAY
MODE

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. • LINE IN SIGNAL LEVEL... −10dB 1kHz

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

5 6 7 8 9 10 11 12 13 14 15

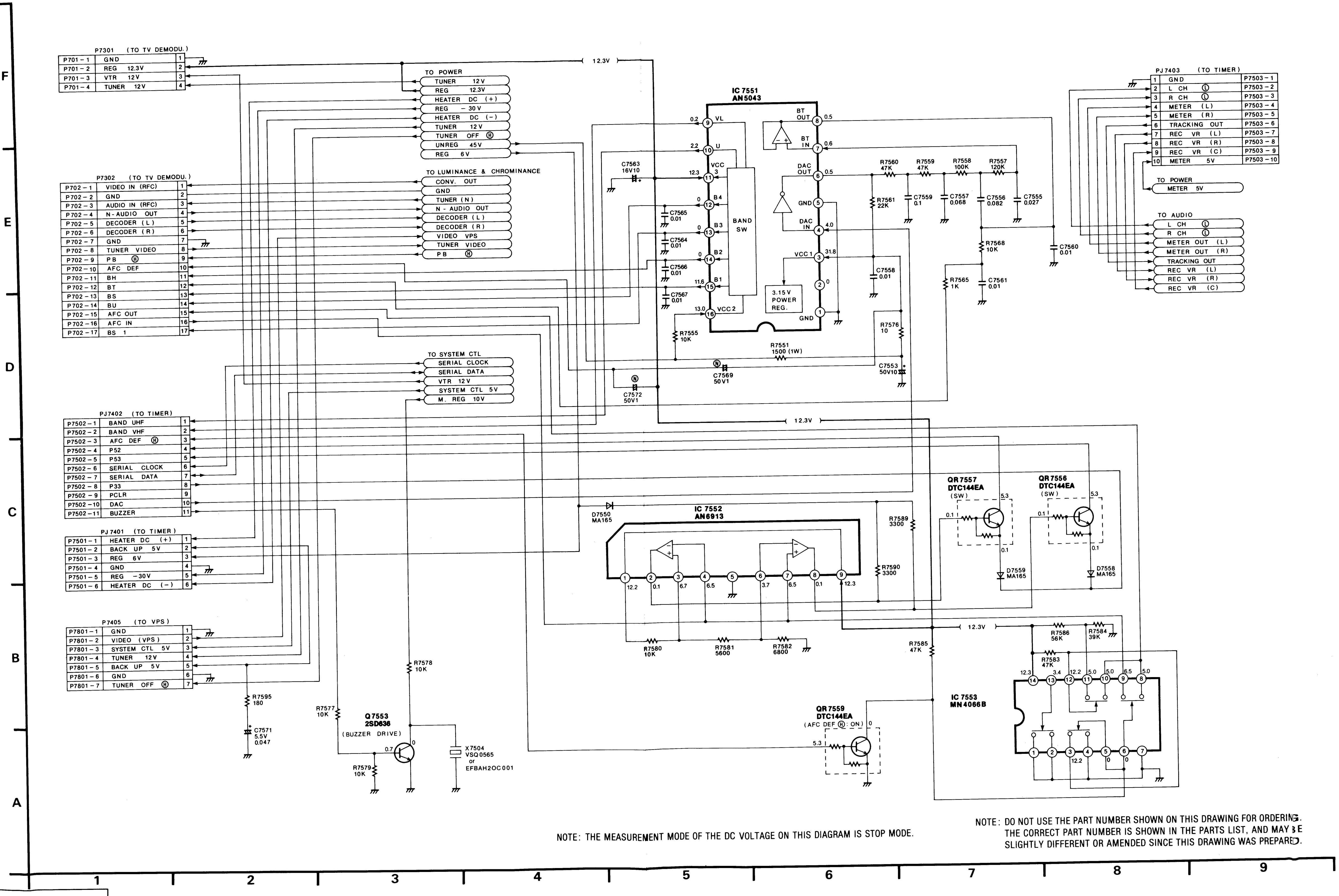
3-26. Hi-Fi AUDIO PACK C.B.A. (VEP04213B)


C
B
A
1
2
3
4
5
6
7
IC4501
IC4502
IC4503
FL4501
FL4502
FL4504
FL4505
QR4501
QR4503
QR4505
QR4506
QR4507
Q4502
Q4505
Q4506
Q4507
Q4508
VR4501
VR4502
VR4505
VR4507
VR4508
VR4509
VR4512
LCH DEV
L CH FREQ
RCH FREQ
RCH DEV
RCH PB
L CH PB
MUTE LEVEL
R ELEV
D4501
D4503
D4516
D4517
D4518
L4502
L4503
L4504

HI-FI AUDIO C.B.A.							
Transistor		Transistor & Resistor		Integrated Circuit		Adjustment	
Q4501	A-3	QR4501	C-5	IC4501	C-4	VR4501	C-6
Q4502	A-6	QR4503	C-3	IC4502	B-7	VR4502	C-5
Q4505	C-1	QR4505	C-2	IC4503	B-2	VR4504	A-3
Q4506	C-1	QR4506	C-2			VR4505	A-4
Q4507	A-1	QR4507	C-2			VR4507	B-5
Q4508	A-6	QR4508	B-2			VR4508	B-4
		QR4509	B-3			VR4512	A-5

ADDRESS INFORMATION

3-27. CH SELECT SCHEMATIC DIAGRAM



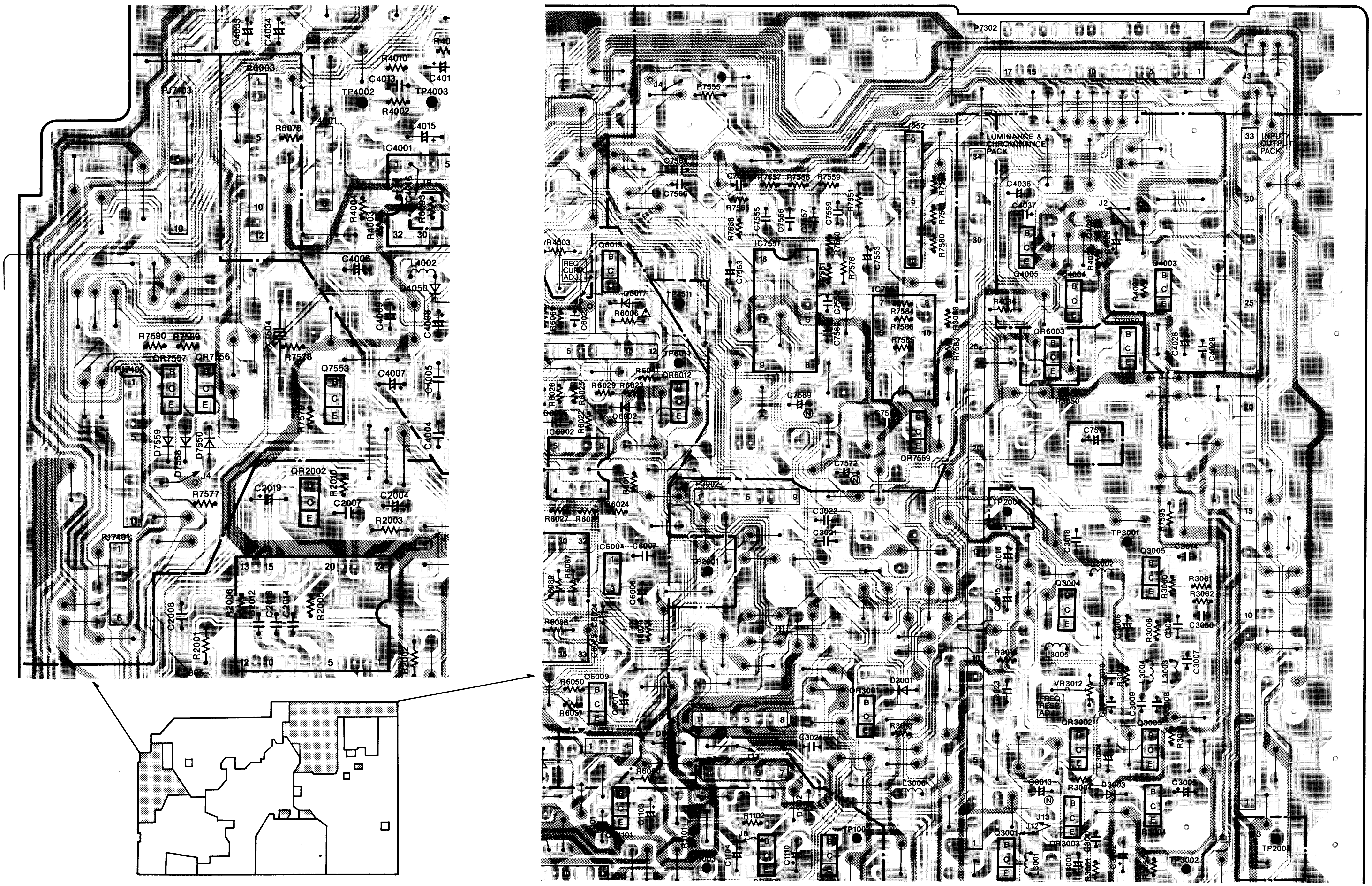
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
P7301 (TO TV DEMODU.)
P701-1 GND 1
P701-2 REG 12.3V 2
P701-3 VTR 12V 3
P701-4 TUNER 12V 4
12.3V
TO POWER
TUNER 12V
REG 12.3V
HEATER DC (+)
REG -30V
HEATER DC (-)
TUNER 12V
TUNER OFF Ⓗ
UNREG 45V
REG 6V
P7302 (TO TV DEMODU.)
P702-1 VIDEO IN (RFC) 1
P702-2 GND 2
P702-3 AUDIO IN (RFC) 3
P702-4 N-AUDIO OUT 4
P702-5 DECODER (L) 5
P702-6 DECODER (R) 6
P702-7 GND 7
P702-8 TUNER VIDEO 8
P702-9 PB Ⓗ 9
P702-10 AFC DEF 10
P702-11 BH 11
P702-12 BT 12
P702-13 BS 13
P702-14 BU 14
P702-15 AFC OUT 15
P702-16 AFC IN 16
P702-17 BS 1 17
TO LUMINANCE & CHROMINANCE
CONV. OUT
GND
TUNER (N)
N-AUDIO OUT
DECODER (L)
DECODER (R)
VIDEO VPS
TUNER VIDEO
PB Ⓗ
TO SYSTEM CTL
SERIAL CLOCK
SERIAL DATA
VTR 12V
SYSTEM CTL 5V
M. REG 10V
PJ7402 (TO TIMER)
P7502-1 BAND UHF 1
P7502-2 BAND VHF 2
P7502-3 AFC DEF Ⓗ 3
P7502-4 P52 4
P7502-5 P53 5
P7502-6 SERIAL CLOCK 6
P7502-7 SERIAL DATA 7
P7502-8 P33 8
P7502-9 PCLR 9
P7502-10 DAC 10
P7502-11 BUZZER 11
PJ7401 (TO TIMER)
P7501-1 HEATER DC (+) 1
P7501-2 BACK UP 5V 2
P7501-3 REG 6V 3
P7501-4 GND 4
P7501-5 REG -30V 5
P7501-6 HEATER DC (-) 6
P7405 (TO VPS)
P7801-1 GND 1
P7801-2 VIDEO (VPS) 2
P7801-3 SYSTEM CTL 5V 3
P7801-4 TUNER 12V 4
P7801-5 BACK UP 5V 5
P7801-6 GND 6
P7801-7 TUNER OFF Ⓗ 7
IC 7551 AN5043
VL
U
VCC 3
B4
B3
B2
B1
VCC 2
BAND SW
BT OUT
BT IN
DAC OUT
GND
DAC IN
VCC 1
3.15V POWER REG.
GND
C7563 16V10
C7565 0.01
C7564 0.01
C7566 0.01
C7567 0.01
R7555 10K
R7560 47K
R7559 47K
R7558 100K
R7557 120K
R7561 22K
C7559 0.1
C7557 0.068
C7556 0.082
C7555 0.027
R7568 10K
R7565 1K
C7561 0.01
C7558 0.01
C7560 0.01
R7576 10
R7551 1500 (1W)
C7553 50V10
C7569 50V1
C7572 50V1
12.3V
PJ7403 (TO TIMER)
1 GND P7503-1
2 L CH Ⓛ P7503-2
3 R CH Ⓛ P7503-3
4 METER (L) P7503-4
5 METER (R) P7503-5
6 TRACKING OUT P7503-6
7 REC VR (L) P7503-7
8 REC VR (R) P7503-8
9 REC VR (C) P7503-9
10 METER 5V P7503-10
TO POWER
METER 5V
TO AUDIO
L CH Ⓛ
R CH Ⓛ
METER OUT (L)
METER OUT (R)
TRACKING OUT
REC VR (L)
REC VR (R)
REC VR (C)
QR7557 DTC144EA (SW)
QR7556 DTC144EA (SW)
D7559 MA165
D7558 MA165
D7550 MA165
IC 7552 AN6913
R7589 3300
R7590 3300
R7580 10K
R7581 5600
R7582 6800
12.3V
R7585 47K
R7586 56K
R7584 39K
R7583 47K
IC 7553 MN4066B
QR7559 DTC144EA (AFC DEF Ⓗ: ON)
R7595 180
C7571 5.5V 0.047
R7577 10K
R7578 10K
Q7553 2SD636 (BUZZER DRIVE)
R7579 10K
X7504 VSQ0565 or EFBAH2OC001

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

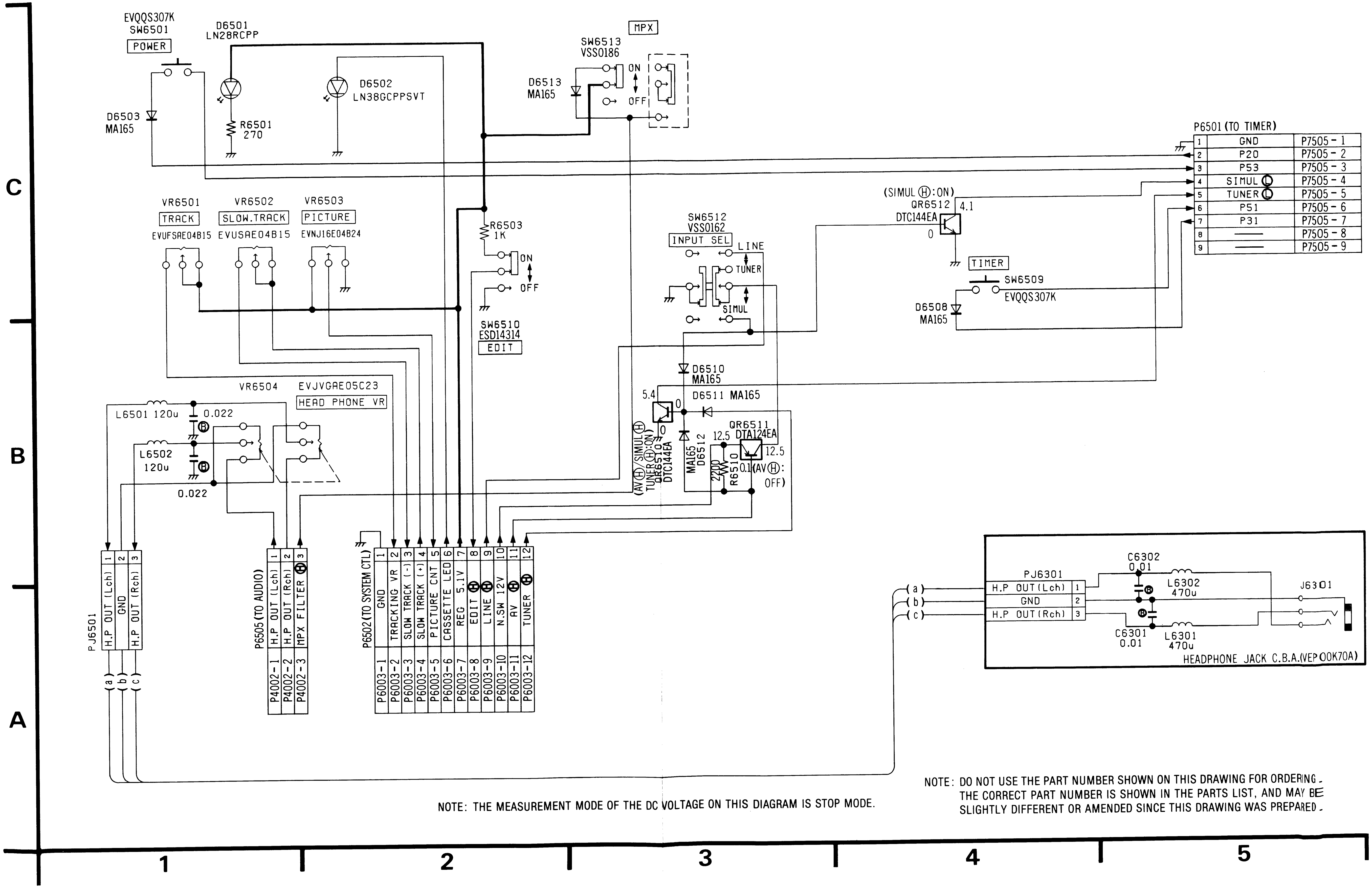
Back Page:
H-Fi AUDIO Section

3-28. CH SELECT Section In Main C.B.A. (VEP03472B)



PJ7403
P6003
C4033
C4034
R4010
C4013
TP4002
R4002
TP4003
R6076
P4001
C4015
IC4001
R4004
R4003
R6093
C4006
L4002
D4050
C4009
C4008
X7504
R7578
Q7553
C4007
C4005
C4004
R7590
R7589
QR7557
QR7556
PJ7402
D7559
D7558
D7550
J4
R7577
QR2002
C2019
R2010
C2007
C2004
R2003
PJ7401
C2008
R2006
C2012
C2013
C2014
R2005
R2001
C2005
R2002
P7302
J3
R7555
IC7552
LUMINANCE & CHROMINANCE PACK
INPUT/ OUTPUT PACK
C7564
C7566
C7561
R7557
R7558
R7559
R7565
R7568
C7555
C7556
C7557
C7559
R7551
IC7551
C7563
R7561
R7576
C7553
R7580
R7581
C4036
C4037
J2
Q4005
Q4004
Q4003
R4027
R4036
QR6003
C4028
C4029
VR4503
REC CURR. ADJ.
Q6019
D6017
R6006
TP4511
IC7553
R7584
R7586
R7585
R7583
R7563
TP6011
R6041
QR6012
R6029
R6023
R6026
R4025
D6005
D6002
IC6002
R6022
C7569
C7558
C7560
QR7559
R3050
C7571
C7572
R6017
R6024
R6027
R6028
P3002
C3022
C3021
TP2001
TP3001
R7595
C3014
C3018
IC6004
C6007
TP3001
C3016
L3002
Q3005
Q3004
R3060
R3061
R3062
C3015
C3006
R3006
C3020
C3050
C6006
R6089
R6087
R6086
C6024
R6070
R3011
L3005
L3004
L3003
C3007
Q6009
R6050
R6051
C6017
QR3001
D3001
R3013
VR3012
FREQ. RESP. ADJ.
C3023
C3009
C3008
QR3002
Q3003
C3024
R6003
L3006
C3004
D3003
C3005
C3013
R3004
Q3001
J12
J13
QR3003
R3004
C1103
R1102
J6
C1104
C1110
TP1001
R1101
L3001
C3001
TP3002
R3052
TP2008

3-29. OPERATION SCHEMATIC DIAGRAM

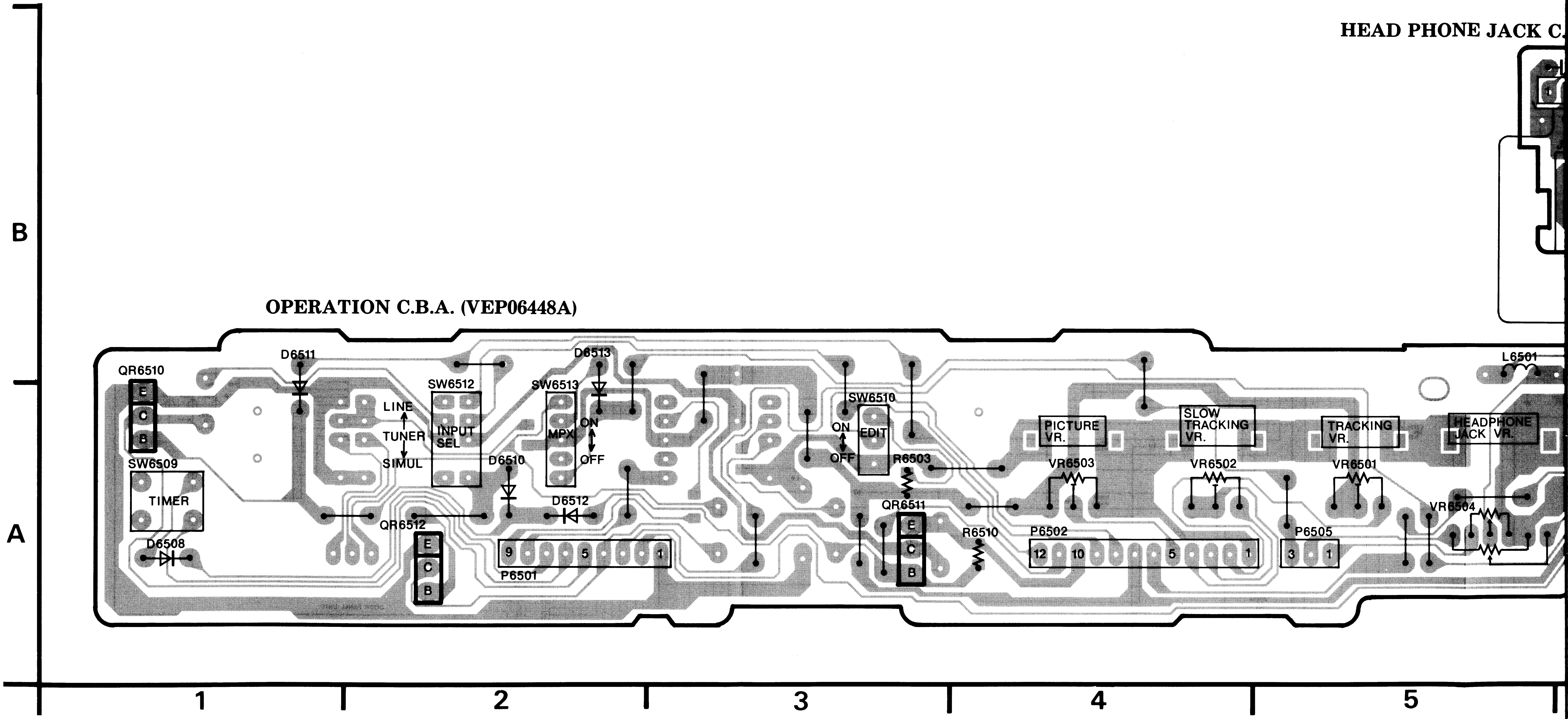

EVQQS307K
SW6501
POWER
D6501
LN28RCPP
D6502
LN38GCPPSVT
D6503
MA165
R6501
270
MPX
SW6513
VSS0186
D6513
MA165
ON
OFF
P6501 (TO TIMER)
1 GND P7505-1
2 P20 P7505-2
3 P53 P7505-3
4 SIMUL Ⓛ P7505-4
5 TUNER Ⓛ P7505-5
6 P51 P7505-6
7 P31 P7505-7
8 P7505-8
9 P7505-9
VR6501
TRACK
EVUFSAE04B15
VR6502
SLOW.TRACK
EVUSAE04B15
VR6503
PICTURE
EVNJ16E04B24
R6503
1K
ON
OFF
SW6510
ESD14314
EDIT
SW6512
VSS0162
INPUT SEL
LINE
TUNER
SIMUL
(SIMUL Ⓗ:ON)
QR6512
DTC144EA
4.1
0
TIMER
SW6509
EVQQS307K
D6508
MA165
D6510
MA165
D6511 MA165
5.4
0
0
QR6510
DTC144EA
(AVⒽ/SIMULⒽ TUNERⒽ:ON)
MA165
D6512
12.5
QR6511
DTA124EA
12.5
0.1
(AVⒽ: OFF)
R6510
2200
VR6504 EVJVGAE05C23
HEAD PHONE VR
L6501 120u
0.022
L6502
120u
0.022
PJ6501
1 H.P OUT (Lch)
2 GND
3 H.P OUT (Rch)
P6505 (TO AUDIO)
1 H.P OUT (Lch) P4002-1
2 H.P OUT (Rch) P4002-2
3 MPX FILTER Ⓗ P4002-3
P6502 (TO SYSTEM CTL)
1 GND P6003-1
2 TRACKING VR P6003-2
3 SLOW TRACK (-) P6003-3
4 SLOW TRACK (+) P6003-4
5 PICTURE CNT P6003-5
6 CASSETTE LED P6003-6
7 REG 5.1V P6003-7
8 EDIT Ⓗ P6003-8
9 LINE Ⓗ P6003-9
10 N.SW 12V P6003-10
11 AV Ⓗ P6003-11
12 TUNER Ⓗ P6003-12
(a)
(b)
(c)
PJ6301
1 H.P OUT (Lch)
2 GND
3 H.P OUT (Rch)
C6302
0.01
L6302
470u
C6301
0.01
L6301
470u
J6301
HEADPHONE JACK C.B.A.(VEP00K70A)
C
B
A
1
2
3
4
5

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

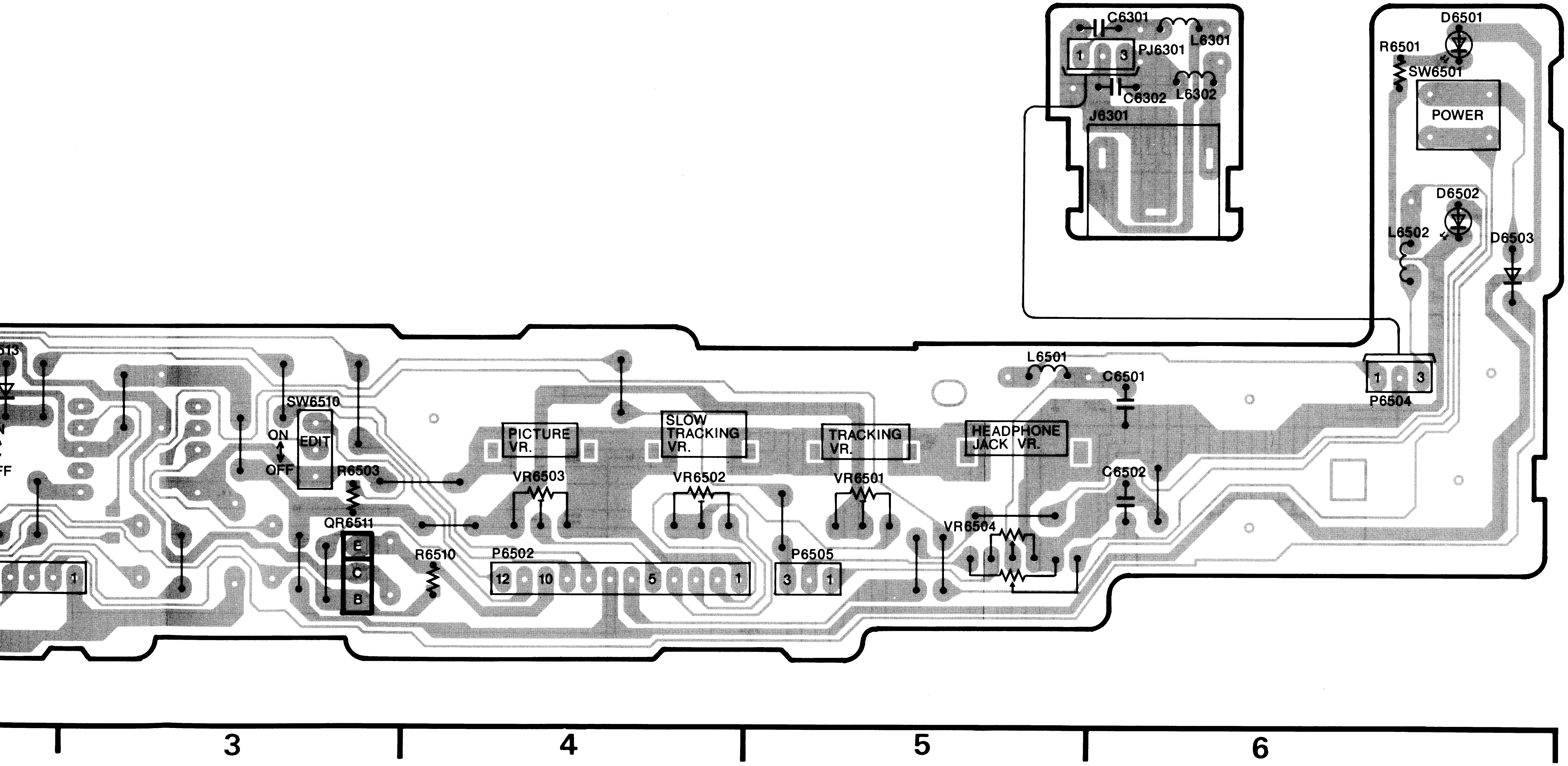
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Back Page:
CH SELECT Section

3-30. OPERATION C.B.A. (VEP06448A)


HEAD PHONE JACK C.
OPERATION C.B.A. (VEP06448A)
B
A
1
2
3
4
5
QR6510
E
C
B
SW6509
TIMER
D6508
D6511
LINE
TUNER
SIMUL
SW6512
INPUT SEL
QR6512
E
C
B
D6513
SW6513
MPX
ON
OFF
D6510
D6512
P6501
9
5
1
SW6510
ON
OFF
EDIT
R6503
QR6511
E
C
B
R6510
PICTURE VR.
VR6503
P6502
12
10
5
1
SLOW TRACKING VR.
VR6502
TRACKING VR.
VR6501
P6505
3
1
HEADPHONE JACK VR.
VR6504
L6501

HEAD PHONE JACK C.B.A. (VEP00K70A)

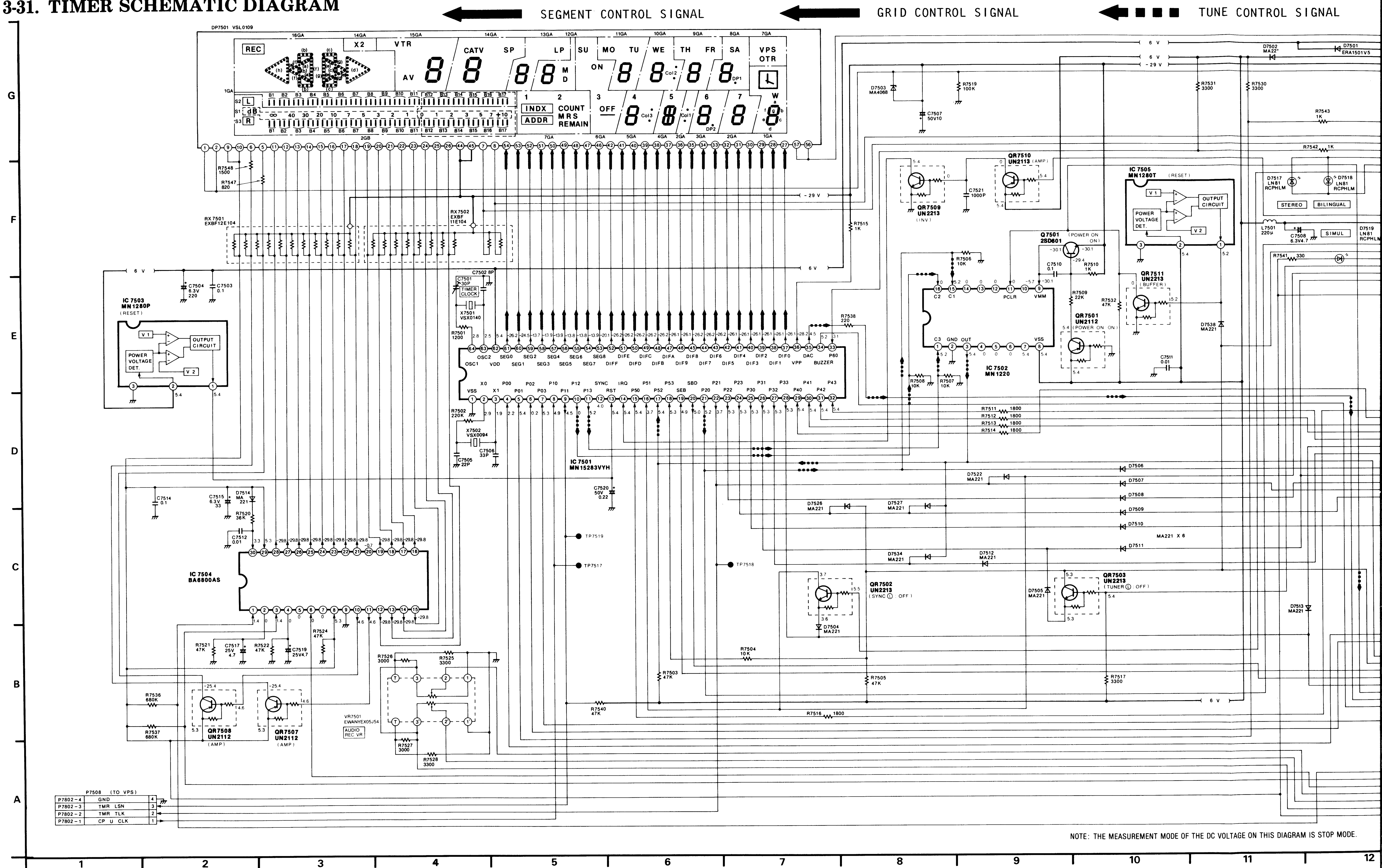

C6301
L6301
PJ6301
1
3
C6302
L6302
J6301
D6501
R6501
SW6501
POWER
D6502
L6502
D6503
L6501
C6501
P6504
1
3
SW6510
ON
OFF
EDIT
R6503
QR6511
E
C
B
R6510
PICTURE VR.
VR6503
SLOW TRACKING VR.
VR6502
TRACKING VR.
VR6501
HEADPHONE JACK VR.
VR6504
C6502
P6502
12
10
5
1
P6505
3
1
3
4
5
6

OPERATION C.B.A.	
Transistor & Resistor	
QR6510	B-1
QR6511	A-3
QR6512	A-2
Adjustment	
VR6501	A-5
VR6502	A-4
VR6503	A-4
VR6504	A-5
Connector	
P6501	A-2
P6502	A-4
P6504	A-6
P6505	A-5
PJ6301	B-6

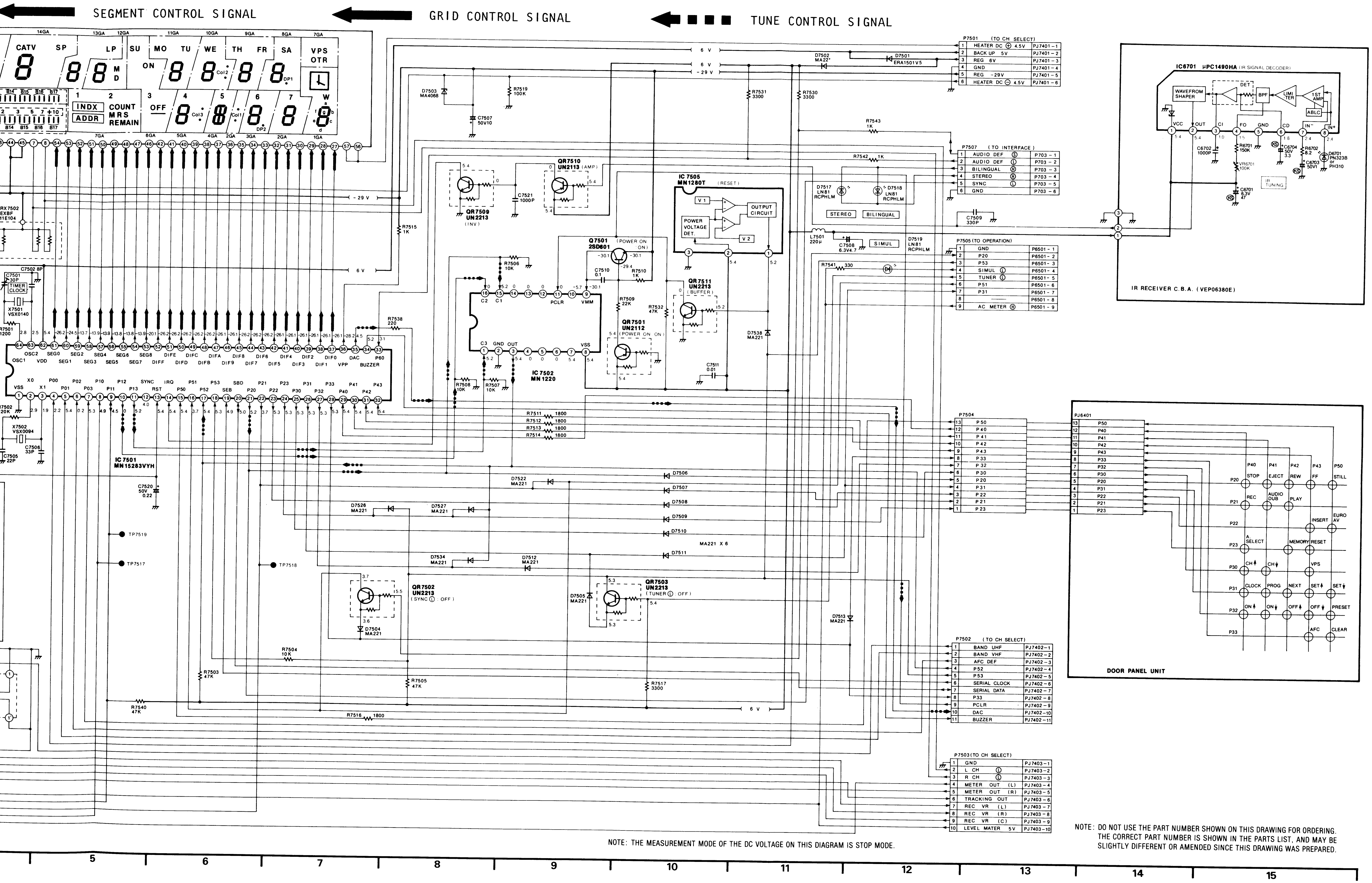
ADDRESS INFORMATION

Next Page:
TIMER Section

3-31. TIMER SCHEMATIC DIAGRAM


SEGMENT CONTROL SIGNAL
GRID CONTROL SIGNAL
TUNE CONTROL SIGNAL
DP7501 VSL0109
REC
X2
VTR
CATV
SP
LP
SU
MO
TU
WE
TH
FR
SA
VPS
OTR
AV
M
D
ON
OFF
INDX
ADDR
COUNT
MRS
REMAIN
W
R7548 1500
R7547 820
RX7501 EXBF12E104
RX7502 EXBF 11E104
IC 7503 MN1280P
(RESET)
V1
V2
OUTPUT CIRCUIT
POWER VOLTAGE DET.
C7504 6.3V 220
C7503 0.1
C7501 30P
TIMER CLOCK
C7502 8P
X7501 VSX0140
R7501 1200
OSC2
SEG0
SEG2
SEG4
SEG6
SEG8
DIFE
DIFC
DIFA
DIF8
DIF6
DIF4
DIF2
DIF0
DAC
P60
OSC1
VDD
SEG1
SEG3
SEG5
SEG7
DIFF
DIFD
DIFB
DIF9
DIF7
DIF5
DIF3
DIF1
VPP
BUZZER
X0
P00
P02
P10
P12
SYNC
IRQ
P51
P53
SBD
P21
P23
P31
P33
P41
P43
VSS
X1
P01
P03
P11
P13
RST
P50
P52
SEB
P20
P22
P30
P32
P40
P42
R7502 220K
X7502 VSX0094
C7506 33P
C7505 22P
IC 7501 MN15283VYH
C7520 50V 0.22
TP7519
TP7517
TP7518
C7514 0.1
C7515 6.3V 33
D7514 MA221
R7520 36K
C7512 0.01
IC 7504 BA6800AS
R7521 47K
C7517 25V 4.7
R7522 47K
C7519 25V4.7
R7524 47K
R7526 3000
R7525 3300
R7527 3000
R7528 3300
VR7501 EWANYEX05J54
AUDIO REC VR
R7536 680K
R7537 680K
QR7508 UN2112 (AMP)
QR7507 UN2112 (AMP)
R7540 47K
R7503 47K
R7504 10K
R7516 1800
R7505 47K
R7517 3300
P7508 (TO VPS)
P7802-4 GND 4
P7802-3 TMR LSN 3
P7802-2 TMR TLK 2
P7802-1 CP U CLK 1
D7503 MA4068
R7519 100K
C7507 50V10
QR7509 UN2213 (INV)
C7521 1000P
QR7510 UN2113 (AMP)
R7515 1K
R7538 220
R7506 10K
Q7501 2SD601 (POWER ON ON)
C7510 0.1
R7510 1K
R7509 22K
QR7501 UN2112 (POWER ON ON)
C2
C1
PCLR
VMM
C3
GND
OUT
VSS
IC 7502 MN1220
R7508 10K
R7507 10K
R7511 1800
R7512 1800
R7513 1800
R7514 1800
IC 7505 MN1280T (RESET)
R7532 47K
QR7511 UN2213 (BUFFER)
D7538 MA221
C7511 0.01
R7531 3300
R7530 3300
R7543 1K
R7542 1K
D7502 MA22*
D7501 ERA1501V5
D7517 LN81 RCPHLM
D7518 LN81 RCPHLM
STEREO
BILINGUAL
L7501 220μ
C7508 6.3V4.7
SIMUL
D7519 LN81 RCPHLM
R7541 330
D7506
D7507
D7508
D7509
D7510
D7511
MA221 X 6
D7522 MA221
D7526 MA221
D7527 MA221
D7534 MA221
D7512 MA221
QR7502 UN2213 (SYNC ① OFF)
D7504 MA221
D7505 MA221
QR7503 UN2213 (TUNER ① OFF)
D7513 MA221
6 V
-29 V
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

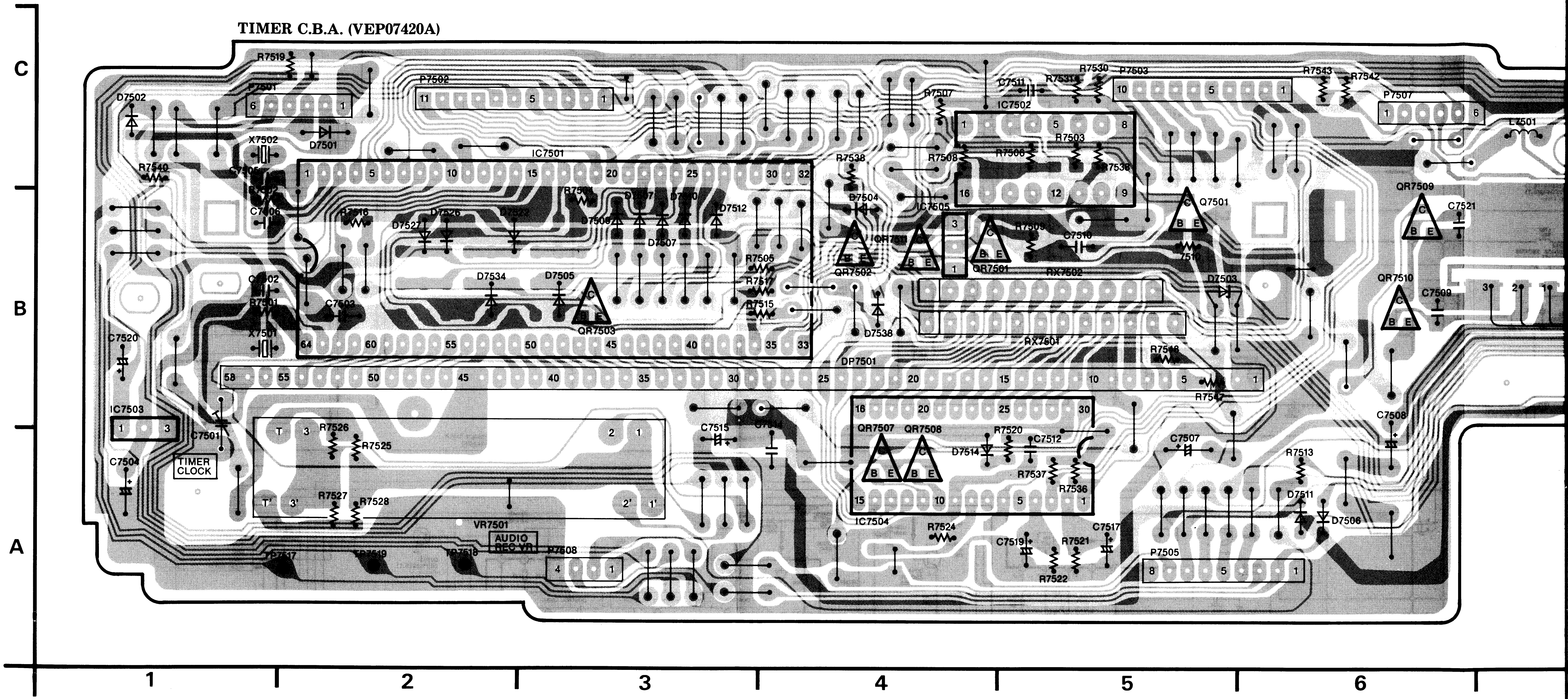


SEGMENT CONTROL SIGNAL
GRID CONTROL SIGNAL
TUNE CONTROL SIGNAL
CATV
SP
LP
SU
MO
TU
WE
TH
FR
SA
VPS
OTR
ON
INDX
ADDR
COUNT
MRS
REMAIN
OFF
IC 7501
MN15283VYH
IC 7502
MN1220
IC 7505
MN1280T
(RESET)
POWER VOLTAGE DET.
OUTPUT CIRCUIT
Q7501
2SD601
(POWER ON : ON)
QR7501
UN2112
(POWER ON : ON)
QR7509
UN2213
(INV)
QR7510
UN2113 (AMP)
QR7511
UN2213
(BUFFER)
QR7502
UN2213
(SYNC Ⓛ : OFF)
QR7503
UN2213
(TUNER Ⓛ : OFF)
X7501
VSX0140
X7502
VSX0094
TP7517
TP7518
TP7519
MA221 X 6
STEREO
BILINGUAL
SIMUL
P7501 (TO CH SELECT)
HEATER DC ⊕ 4.5V
BACK UP 5V
REG 6V
GND
REG -29V
HEATER DC ⊖ 4.5V
P7507 (TO INTERFACE)
AUDIO DEF Ⓢ
AUDIO DEF Ⓛ
BILINGUAL Ⓝ
STEREO Ⓡ
SYNC Ⓛ
GND
P7505 (TO OPERATION)
GND
P20
P53
SIMUL Ⓛ
TUNER Ⓛ
P51
P31
AC METER Ⓡ
P7504
PJ6401
P7502 (TO CH SELECT)
BAND UHF
BAND VHF
AFC DEF
P52
P53
SERIAL CLOCK
SERIAL DATA
P33
PCLR
DAC
BUZZER
P7503 (TO CH SELECT)
GND
L CH Ⓛ
R CH Ⓛ
METER OUT (L)
METER OUT (R)
TRACKING OUT
REC VR (L)
REC VR (R)
REC VR (C)
LEVEL MATER 5V
IC6701 μPC1490HA (IR SIGNAL DECODER)
WAVEFROM SHAPER
DET
BPF
LIMITER
1ST AMP
ABLC
IR TUNING
IR RECEIVER C.B.A. (VEP06380E)
STOP
EJECT
REW
FF
STILL
REC
AUDIO DUB
PLAY
INSERT
EURO AV
A SELECT
MEMORY
RESET
CH▲
CH▼
VPS
CLOCK
PROG
NEXT
SET▲
SET▼
ON▲
ON▼
OFF▲
OFF▼
PRESET
AFC
CLEAR
DOOR PANEL UNIT
5
6
7
8
9
10
11
12
13
14
15

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

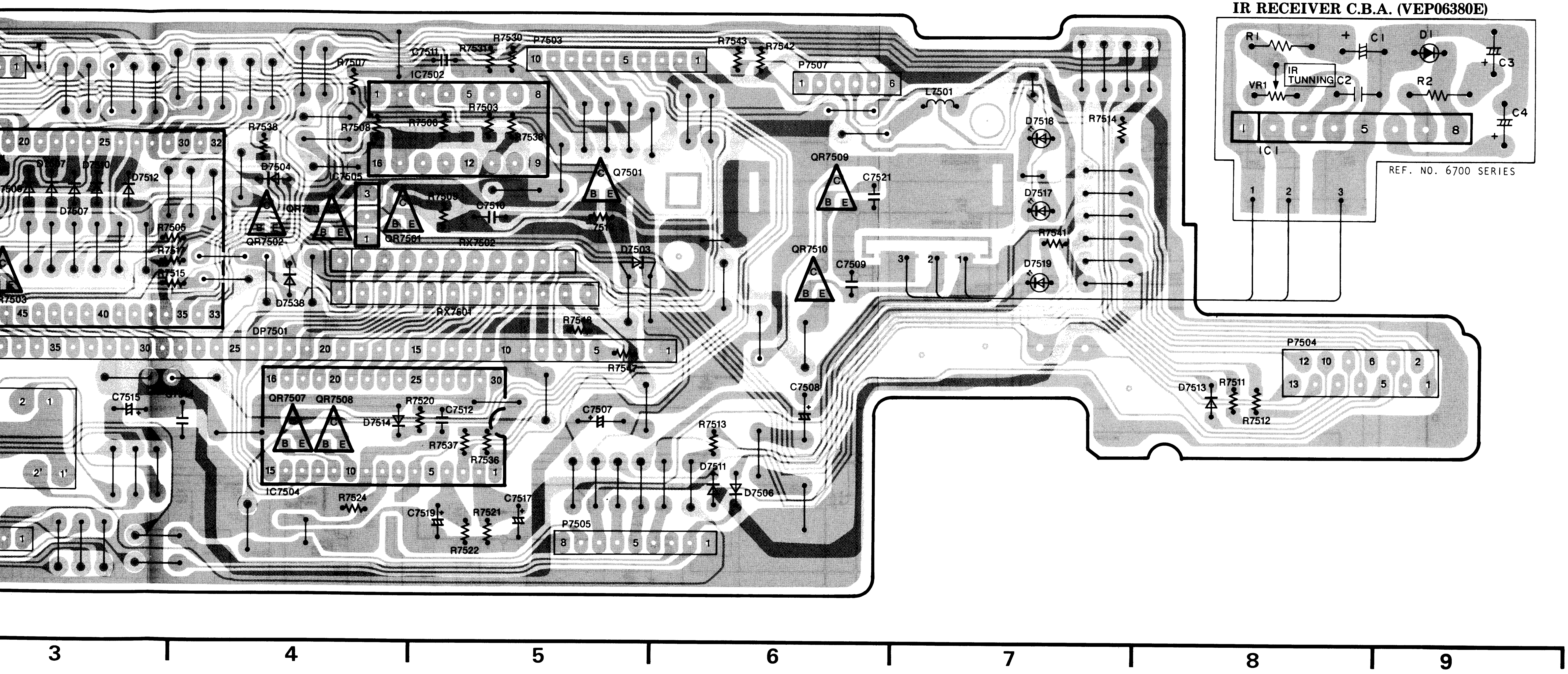
3-32. TIMER C.B.A. (VEP07420A)


TIMER C.B.A. (VEP07420A)
C
B
A
1
2
3
4
5
6
R7519
P7501
P7502
D7502
D7501
X7502
R7540
C7505
C7506
IC7501
R7504
R7516
D7527
D7526
D7523
D7509
D7510
D7508
D7507
D7512
R7505
R7517
R7515
C7502
R7501
C7503
X7501
D7534
D7505
QR7503
C7520
IC7503
C7501
C7504
TIMER CLOCK
DP7501
R7526
R7525
R7527
R7528
VR7501
AUDIO REC VR
TP7517
TP7519
TP7518
P7508
C7515
C7514
R7538
D7504
D7538
QR7502
QR7511
IC7505
QR7501
R7509
C7510
R7507
C7511
R7531
R7530
P7503
IC7502
R7506
R7503
R7508
R7533
RX7502
RX7501
Q7501
R7510
D7503
R7518
R7547
R7543
R7542
P7507
L7501
QR7509
C7521
QR7510
C7509
C7508
IC7504
QR7507
QR7508
R7520
C7512
D7514
R7537
R7536
R7524
C7519
R7521
R7522
C7517
C7507
R7513
D7511
D7506
P7505

TIMER C.B.A.

Transistor		Integrated Circuit		Test Point		Connector	
Q7501	B-5	IC1	C-8	TP7517	A-2	P7501	C-1
Transistor & Resistor		IC7501	B-3	TP7518	A-2	P7502	C-2
QR7501	B-4	IC7502	C-5	TP7519	A-2	P7503	C-5
QR7502	B-4	IC7503	B-1	**Adjustment**		P7504	B-8
QR7503	B-3	IC7504	A-4	C7501	A-1	P7505	A-5
QR7507	A-4	IC7505	B-4	VR1	C-8	P7507	C-6
QR7508	A-4			VR7501	A-2	P7508	A-3
QR7509	B-6			VR7518	A-2		
QR7510	B-6						
QR7511	B-4						

ADDRESS INFORMATION



IR RECEIVER C.B.A. (VEP06380E)

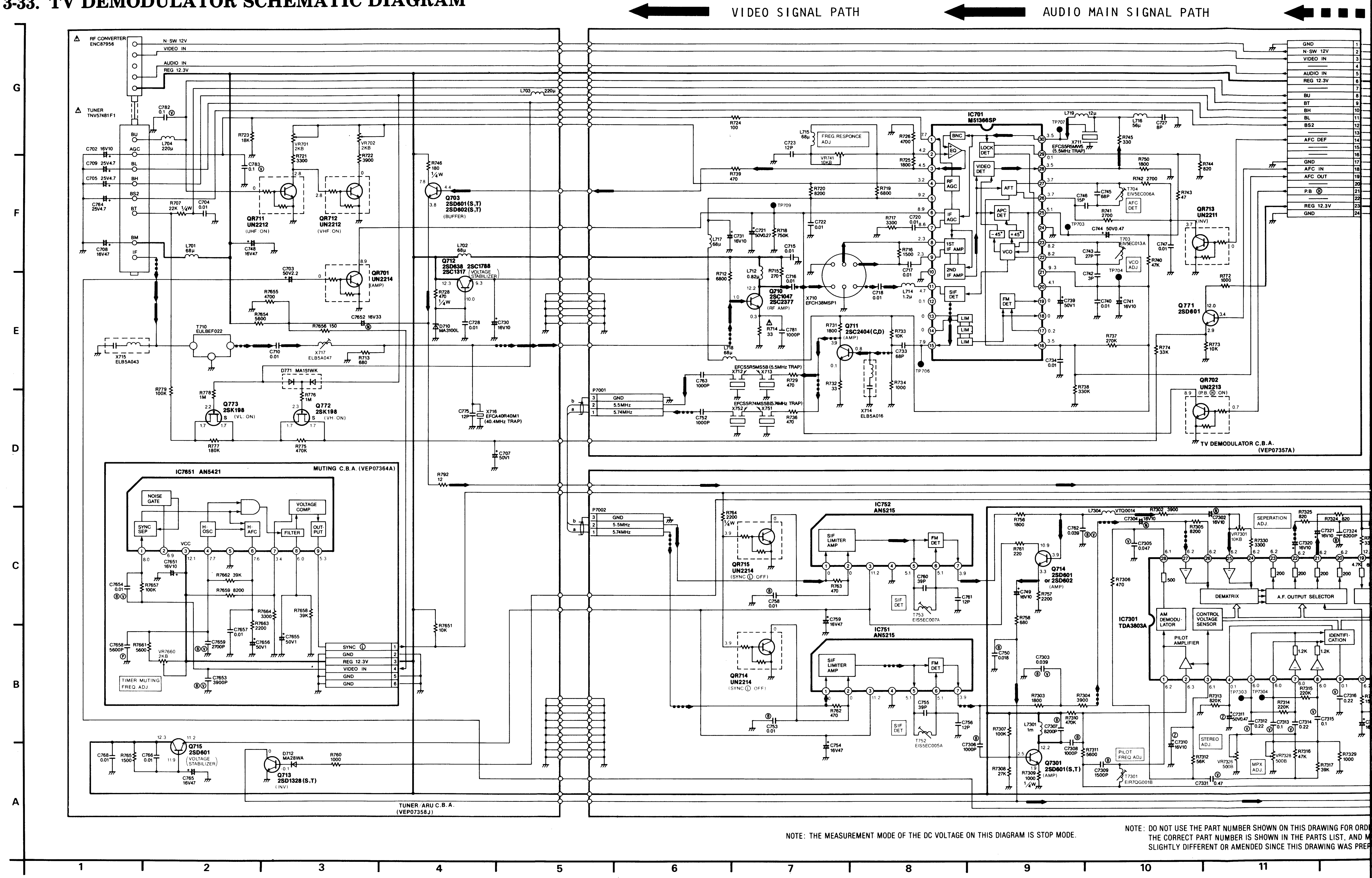
R1
C1
D1
C3
C4
VR1
IR TUNNING
C2
R2
IC1
REF. NO. 6700 SERIES
P7503
P7507
P7504
P7505
IC7502
IC7504
DP7501
RX7501
RX7502
Q7501
QR7501
QR7502
QR7503
QR7507
QR7508
QR7509
QR7510
L7501
D7503
D7504
D7506
D7507
D7511
D7512
D7513
D7514
D7517
D7518
D7519
D7536
C7505
C7507
C7508
C7509
C7510
C7511
C7512
C7515
C7517
C7519
C7521
R7503
R7506
R7507
R7508
R7511
R7512
R7513
R7514
R7515
R7517
R7518
R7520
R7521
R7522
R7524
R7530
R7531
R7536
R7537
R7538
R7541
R7542
R7543
R7547
3
4
5
6
7
8
9

TIMER C.B.A.							
Transistor		**Integrated Circuit**		**Test Point**		**Connector**	
Q7501	B-5	IC1	C-8	TP7517	A-2	P7501	C-1
Transistor & Resistor		IC7501	B-3	TP7518	A-2	P7502	C-2
QR7501	B-4	IC7502	C-5	TP7519	A-2	P7503	C-5
QR7502	B-4	IC7503	B-1	**Adjustment**		P7504	B-8
QR7503	B-3	IC7504	A-4	C7501	A-1	P7505	A-5
QR7507	A-4	IC7505	B-4	VR1	C-8	P7507	C-6
QR7508	A-4			VR7501	A-2	P7508	A-3
QR7509	B-6			VR7518	A-2		
QR7510	B-6						
QR7511	B-4						

ADDRESS INFORMATION

Next Page:
TV DEMODULATOR Section

3-33. TV DEMODULATOR SCHEMATIC DIAGRAM


VIDEO SIGNAL PATH
AUDIO MAIN SIGNAL PATH
RF CONVERTER ENC87956
TUNER TNV57481F1
N-SW 12V
VIDEO IN
AUDIO IN
REG 12.3V
BU
AGC
BL
BH
BS2
BT
BM
IF
QR711 UN2212 (UHF ON)
QR712 UN2212 (VHF ON)
QR701 UN2214 (AMP)
Q703 2SD601(S,T) 2SD602(S,T) (BUFFER)
Q712 2SD638 2SC1788 2SC1317 (VOLTAGE STABILIZER)
T710 EULBEF022
X715 ELB5A043
X717 ELB5A047
D771 MA151WK
Q773 2SK198 (VL ON)
Q772 2SK198 (VH ON)
X716 EFCA40R40M1 (40.4MHz TRAP)
D710 MA3100L
IC7651 AN5421
MUTING C.B.A. (VEP07364A)
NOISE GATE
SYNC SEP
H-OSC
H-AFC
VOLTAGE COMP.
FILTER
OUT-PUT
TIMER MUTING FREQ. ADJ
SYNC
GND
REG 12.3V
VIDEO IN
Q715 2SD601 (VOLTAGE STABILIZER)
D712 MA28WA
Q713 2SD1328(S,T) (INV)
TUNER/ARU C.B.A. (VEP07358J)
P7001
P7002
GND
5.5MHz
5.74MHz
IC701 M51366SP
FREQ. RESPONCE ADJ
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
APC DET
IF AGC
1ST IF AMP
2ND IF AMP
VCO
SIF DET
LIM
FM DET
X710 EFCH38MSP1
Q710 2SC1047 2SC2377 (RF AMP)
Q711 2SC2404(C,D) (AMP)
EFCS5R5MS5B (5.5MHz TRAP)
EFCS5R74MS5B (5.74MHz TRAP)
X714 ELB5A016
X711 EFCS5R5MW5 (5.5MHz TRAP)
T704 EIV5EC006A
AFC DET
T703 EIV5EC013A
VCO ADJ
TP703
TP704
TP706
TP707
TP709
QR713 UN2211 (INV)
Q771 2SD601
QR702 UN2213 (P.B. ON)
TV DEMODULATOR C.B.A. (VEP07357A)
GND
N-SW 12V
VIDEO IN
AUDIO IN
REG 12.3V
BU
BT
BH
BL
BS2
AFC DEF
GND
AFC IN
AFC OUT
P.B
REG 12.3V
GND
IC752 AN5215
IC751 AN5215
SIF LIMITER AMP
FM DET
SIF DET
QR715 UN2214 (SYNC OFF)
QR714 UN2214 (SYNC OFF)
T753 EIS5EC007A
T752 EIS5EC005A
Q714 2SD601 or 2SD602 (AMP)
Q7301 2SD601(S,T) (AMP)
IC7301 TDA3803A
SEPERATION ADJ.
DEMATRIX
A.F. OUTPUT SELECTOR
AM DEMODU-LATOR
CONTROL VOLTAGE SENSOR
PILOT AMPLIFIER
IDENTIFI-CATION
STEREO ADJ.
MPX ADJ
PILOT FREQ ADJ
T7301 EIR7QG001B
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

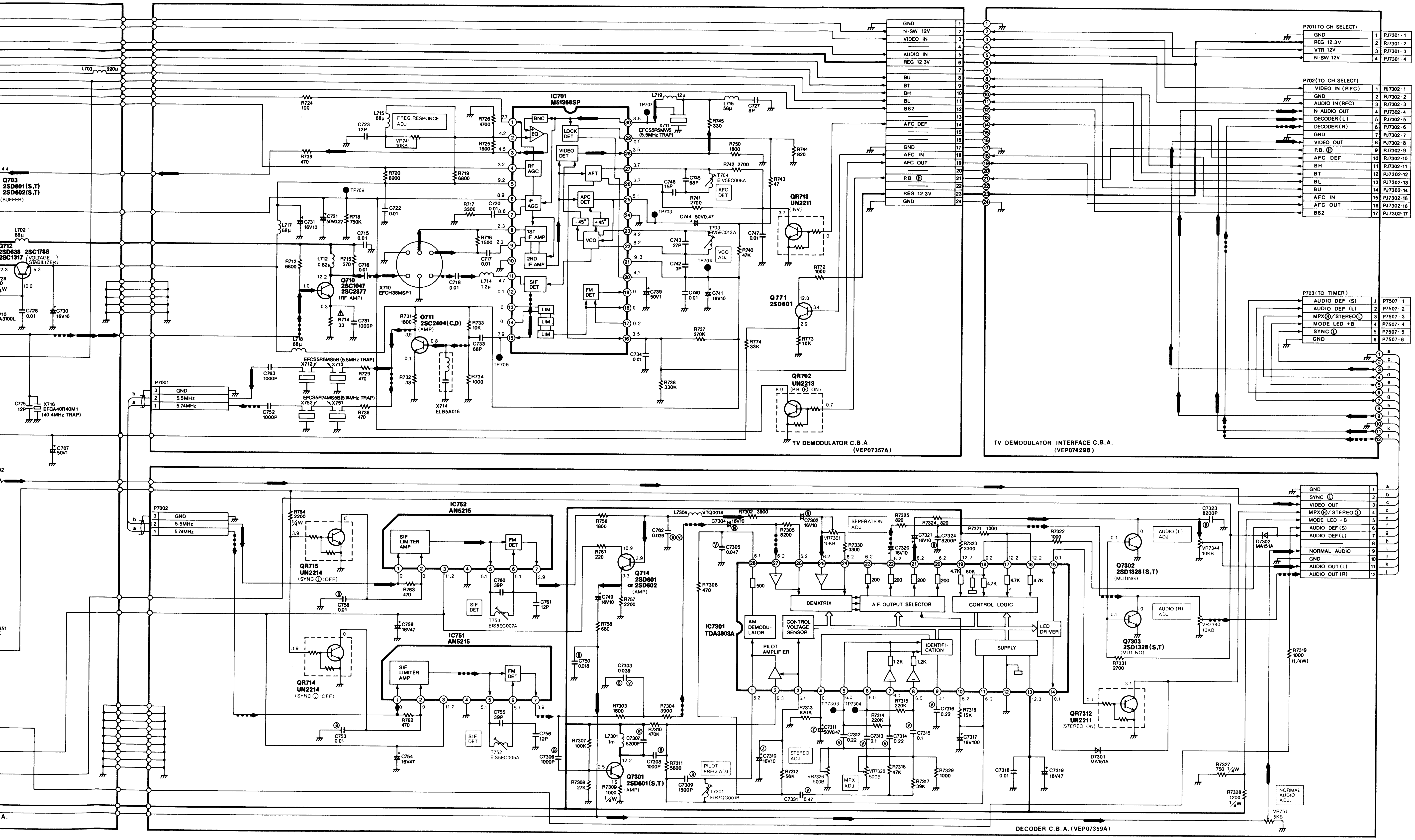
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORD
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND M
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREF

AM

VIDEO SIGNAL PATH

AUDIO MAIN SIGNAL PATH

AUDIO SUB SIGNAL PATH



IC701
M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
IF AGC
APC DET
-45°
+45°
VCO
1ST IF AMP
2ND IF AMP
SIF DET
FM DET
LIM
FREQ. RESPONCE ADJ
AFC DET
VCO ADJ
Q703
2SD601(S,T)
2SD602(S,T)
(BUFFER)
Q712
2SD638 2SC1788
2SC1317 (VOLTAGE STABILIZER)
Q710
2SC1047
2SC2377
(RF AMP)
Q711
2SC2404(C,D)
(AMP)
X710
EFCH38MSP1
X711
EFCS5R5MV5
(5.5MHz TRAP)
EFCS5R5MS5B (5.5MHz TRAP)
EFCS5R74MS5B(5.74MHz TRAP)
X714
ELB5A016
X716
EFCA40R40M1
(40.4MHz TRAP)
T703
EIV5EC013A
T704
EIV5EC006A
QR713
UN2211
(INV)
Q771
2SD601
QR702
UN2213
(PB Ⓗ ON)
P7001
GND
5.5MHz
5.74MHz
TV DEMODULATOR C.B.A.
(VEP07357A)
GND
N-SW 12V
VIDEO IN
AUDIO IN
REG 12.3V
BU
BT
BH
BL
BS2
AFC DEF
GND
AFC IN
AFC OUT
P.B Ⓗ
REG 12.3V
GND
TV DEMODULATOR INTERFACE C.B.A.
(VEP07429B)
P701(TO CH SELECT)
GND
REG 12.3V
VTR 12V
N-SW 12V
PJ7301-1
PJ7301-2
PJ7301-3
PJ7301-4
P702(TO CH SELECT)
VIDEO IN (RFC)
GND
AUDIO IN (RFC)
N-AUDIO OUT
DECODER (L)
DECODER (R)
GND
VIDEO OUT
P B Ⓗ
AFC DEF
BH
BT
BL
BU
AFC IN
AFC OUT
BS2
PJ7302-1 … PJ7302-17
P703(TO TIMER)
AUDIO DEF (S)
AUDIO DEF (L)
MPXⓈ/STEREOⓁ
MODE LED +B
SYNC Ⓛ
GND
P7507-1 … P7507-6
IC752
AN5215
IC751
AN5215
SIF LIMITER AMP
FM DET
SIF DET
T753
EIS5EC007A
T752
EIS5EC005A
QR715
UN2214
(SYNC Ⓛ OFF)
QR714
UN2214
(SYNC Ⓛ OFF)
P7002
GND
5.5MHz
5.74MHz
Q714
2SD601
or 2SD602
(AMP)
Q7301
2SD601(S,T)
(AMP)
IC7301
TDA3803A
DEMATRIX
A.F. OUTPUT SELECTOR
CONTROL LOGIC
AM DEMODULATOR
CONTROL VOLTAGE SENSOR
PILOT AMPLIFIER
IDENTIFICATION
SUPPLY
LED DRIVER
SEPERATION ADJ.
STEREO ADJ
MPX ADJ
PILOT FREQ. ADJ
T7301
EIR7QG001B
AUDIO (L) ADJ
AUDIO (R) ADJ
Q7302
2SD1328(S,T)
(MUTING)
Q7303
2SD1328(S,T)
(MUTING)
QR7312
UN2211
(STEREO ON)
D7301
MA151A
D7302
MA151A
NORMAL AUDIO ADJ
VR751
5KB
GND
SYNC Ⓛ
VIDEO OUT
MPXⓈ/STEREOⓁ
MODE LED +B
AUDIO DEF (S)
AUDIO DEF (L)
NORMAL AUDIO
GND
AUDIO OUT (L)
AUDIO OUT (R)
DECODER C.B.A. (VEP07359A)

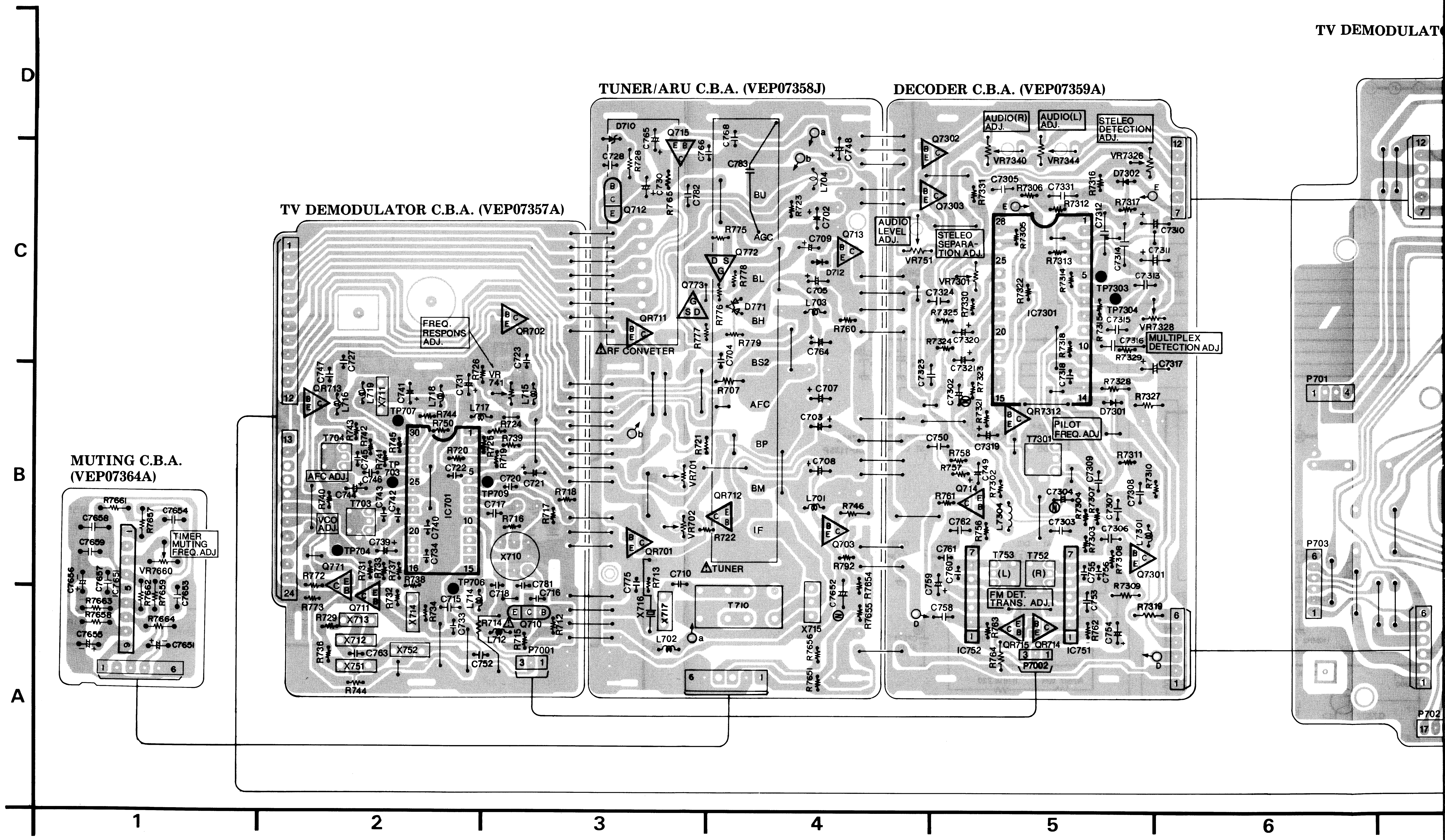
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

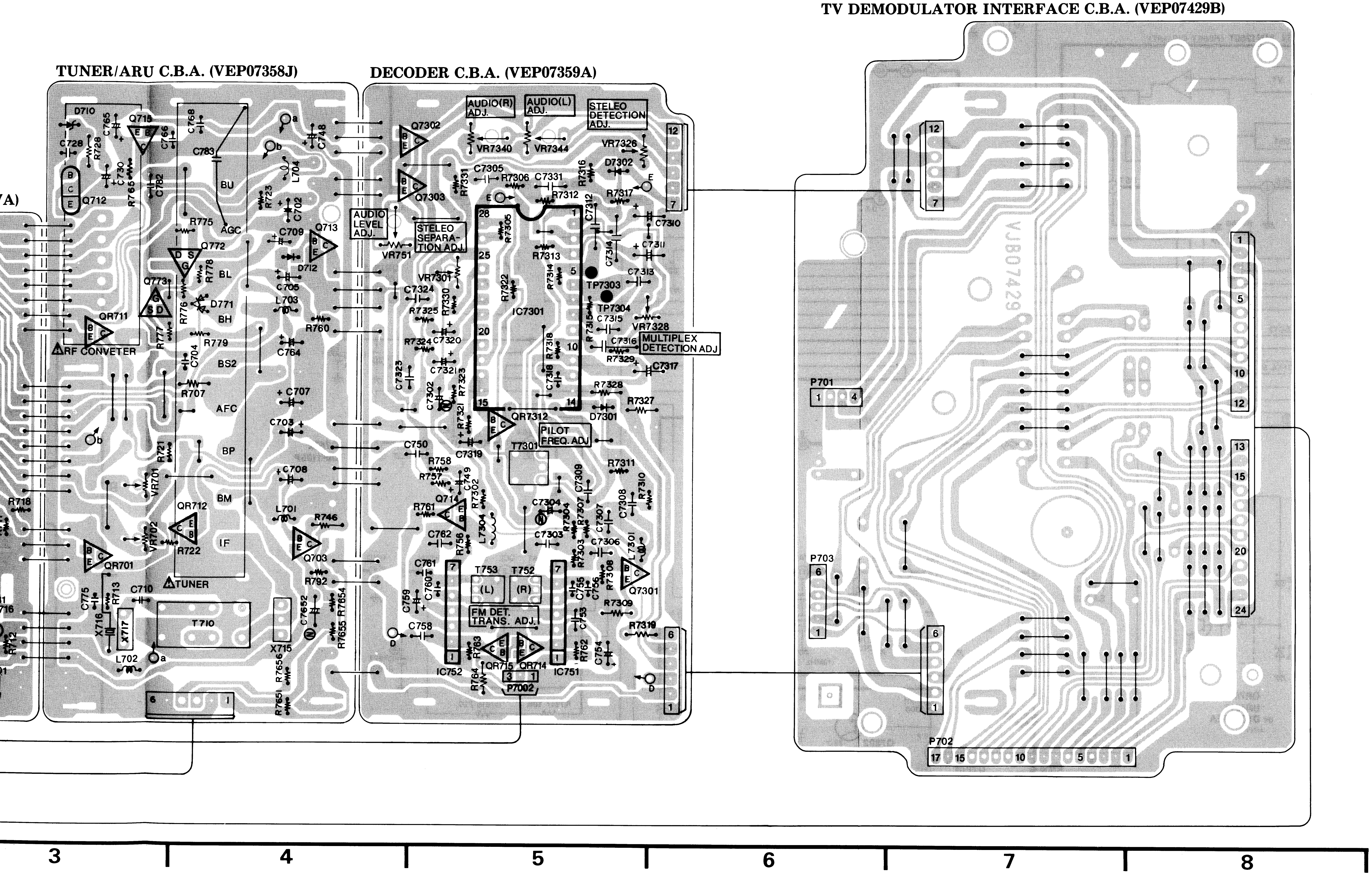
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

5 6 7 8 9 10 11 12 13 14 15

3-34. TV DEMODULATOR INTERFACE C.B.A. (VEP07429B), TV DEMODULATOR C.B.A. (VEP07357A) & TUNER/ARU C.B.A. (VEP07358J)


TV DEMODULAT
TUNER/ARU C.B.A. (VEP07358J)
DECODER C.B.A. (VEP07359A)
TV DEMODULATOR C.B.A. (VEP07357A)
MUTING C.B.A. (VEP07364A)
TIMER MUTING FREQ. ADJ
VR7660
IC7651
FREQ. RESPONS ADJ.
VR 741
AFC ADJ
VCO ADJ.
IC701
TP703
TP704
TP706
TP707
TP709
X710
ΔRF CONVETER
ΔTUNER
T710
AGC
BU
BL
BH
BS2
AFC
BP
BM
IF
VR701
VR702
AUDIO(R) ADJ.
AUDIO(L) ADJ.
STELEO DETECTION ADJ.
VR7340
VR7344
VR7326
AUDIO LEVEL ADJ.
VR751
STELEO SEPARA-TION ADJ.
VR7301
IC7301
TP7303
TP7304
VR7328
MULTIPLEX DETECTION ADJ
PILOT FREQ. ADJ
T7301
T753
T752
(L)
(R)
FM DET. TRANS. ADJ.
IC752
IC751
P7001
P7002
P701
P702
P703
D
C
B
A
1
2
3
4
5
6

V DEMODULATOR C.B.A. (VEP07357A) & TUNER/ARU C.B.A. (VEP07358J)

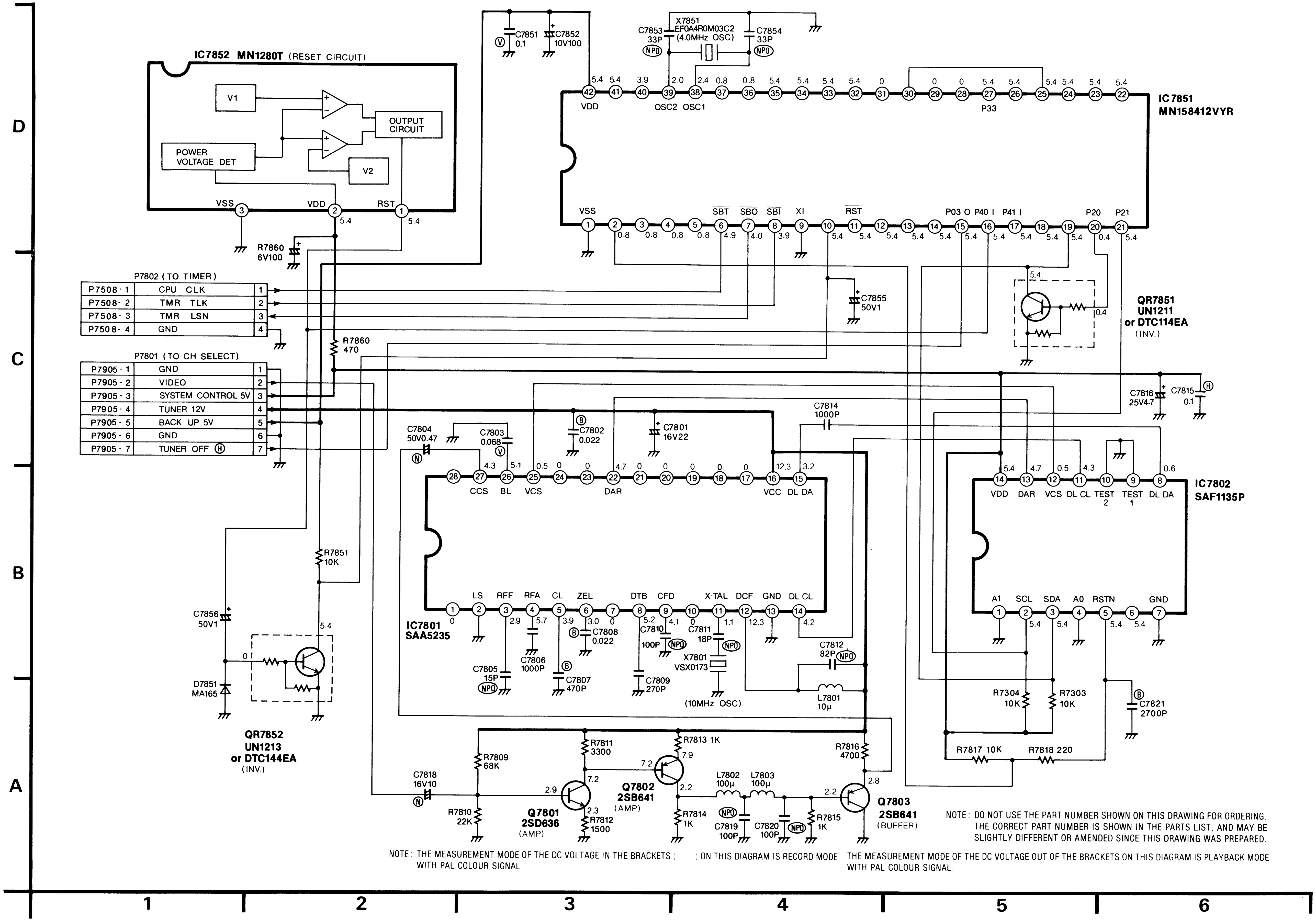

TV DEMODULATOR INTERFACE C.B.A. (VEP07429B)
TUNER/ARU C.B.A. (VEP07358J)
DECODER C.B.A. (VEP07359A)
D710
C728
R728
C765
C730
R765
Q715
C768
C766
C783
C782
Q712
BU
AGC
R775
Q772
BL
R778
Q773
D771
BH
QR711
RF CONVETER
R777
R776
R779
C704
BS2
R707
AFC
BP
R721
VR701
BM
QR712
R718
VR702
R722
IF
QR701
TUNER
C775
R713
C710
T710
X716
X717
L702
R712
X715
C7652
R7656
R7651
R7654
R7655
a
b
C748
L704
R723
C702
C709
Q713
D712
C705
L703
R760
C764
C707
C703
C708
L701
R746
Q703
R792
AUDIO(R) ADJ.
AUDIO(L) ADJ.
STELEO DETECTION ADJ.
Q7302
VR7340
VR7344
VR7326
Q7303
R7331
C7305
R7306
C7331
R7316
D7302
R7312
R7317
E
AUDIO LEVEL ADJ.
STELEO SEPARA-TION ADJ.
VR751
R7305
C7312
C7310
C7314
C7311
R7313
IC7301
VR7301
C7324
R7325
R7330
R7322
R7314
TP7303
TP7304
C7313
C7315
VR7328
R7315
R7324
C7320
C7316
MULTIPLEX DETECTION ADJ
R7329
C7317
R7318
C7323
C7321
R7323
C7302
R7321
C7318
R7328
R7327
QR7312
D7301
PILOT FREQ. ADJ
C750
C7319
T7301
R758
R757
C749
R7302
R7311
C7309
R7310
R761
Q714
C7304
R7304
R7307
C7307
C7308
L7304
C762
R756
C7303
R7303
C7306
L7301
R7308
Q7301
C761
C760
T753
T752
(L)
(R)
C755
C756
C753
R7309
C759
C758
FM DET. TRANS. ADJ.
R7319
R763
QR715
QR714
R762
C754
IC752
IC751
R764
P7002
D
P701
P703
P702
VJB07429
1
4
5
6
7
10
12
13
15
17
20
24
3
4
5
6
7
8

TV DEMODULATOR C.B.A. & TUNER/ARU C.B.A.	
Transistor	
Q703	B-4
Q710	A-3
Q711	A-2
Q712	C-3
Q713	C-4
Q714	B-5
Q715	C-3
Q771	B-2
Q772	C-4
Q773	C-3
Q7301	B-5
Q7302	C-5
Q7303	C-5
Transistor & Resistor	
QR701	B-3
QR702	C-3
QR711	C-3
QR712	B-4
QR713	B-2
QR714	A-5
QR715	A-5
QR7312	B-5
Integrated Circuit	
IC701	B-2
IC751	A-5
IC752	A-5
IC7301	C-5
IC7651	B-1
Test Point	
TP703	B-2
TP704	B-2
TP706	B-2
TP707	B-2
TP709	B-3
TP7303	C-5
TP7304	C-5
Adjustment	
VR701	B-3
VR702	B-3
VR741	B-3
VR751	C-4
VR7301	C-5
VR7326	C-5
VR7328	C-5
VR7340	C-5
VR7344	C-5
VR7660	B-1
T703	B-2
T704	B-2
T752	B-5
T753	B-5
T7301	B-5
Connector	
P701	B-6
P702	A-7
P703	B-6
P7001	A-3
P7002	A-5

ADDRESS INFORMATION

Next Page:
VPS Section

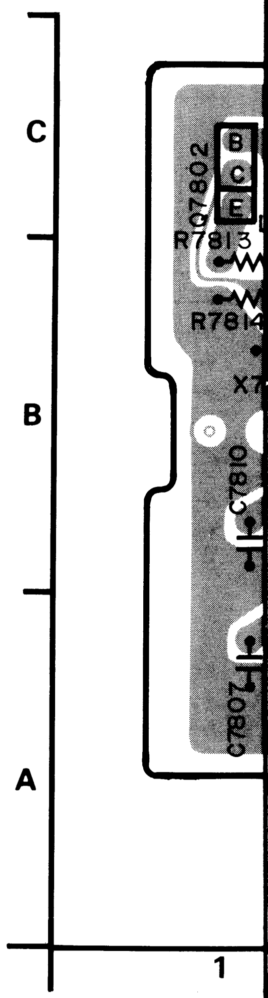
3-35. VPS SCHEMATIC DIAGRAM

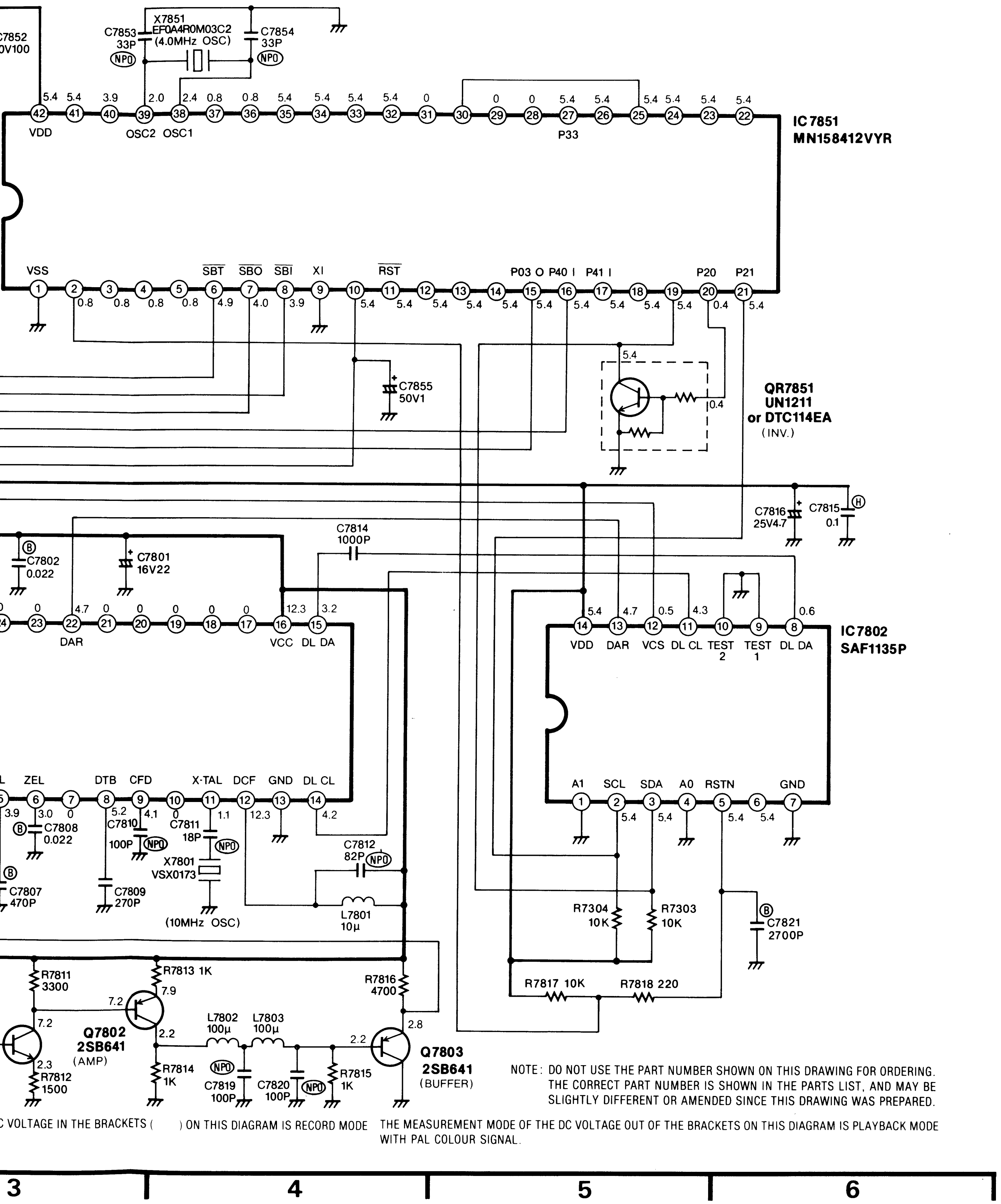

IC7852 MN1280T (RESET CIRCUIT)
V1
V2
POWER VOLTAGE DET
OUTPUT CIRCUIT
VSS
VDD
RST
R7860 6V100
P7802 (TO TIMER)
P7508-1 CPU CLK 1
P7508-2 TMR TLK 2
P7508-3 TMR LSN 3
P7508-4 GND 4
R7860 470
P7801 (TO CH SELECT)
P7905-1 GND 1
P7905-2 VIDEO 2
P7905-3 SYSTEM CONTROL 5V 3
P7905-4 TUNER 12V 4
P7905-5 BACK UP 5V 5
P7905-6 GND 6
P7905-7 TUNER OFF Ⓗ 7
R7851 10K
C7856 50V1
D7851 MA165
QR7852 UN1213 or DTC144EA (INV.)
C7851 0.1
C7852 10V100
X7851 EF0A4R0M03C2 (4.0MHz OSC)
C7853 33P NPO
C7854 33P NPO
IC7851 MN158412VYR
VDD
OSC2 OSC1
P33
VSS
SBT SBO SBI XI RST
P03 O P40 I P41 I
P20 P21
C7855 50V1
QR7851 UN1211 or DTC114EA (INV.)
C7816 25V4.7
C7815 0.1
C7814 1000P
C7804 50V0.47
C7803 0.068
C7802 0.022
C7801 16V22
IC7801 SAA5235
CCS BL VCS DAR VCC DL DA
LS RFF RFA CL ZEL DTB CFD X-TAL DCF GND DL CL
C7805 15P NPO
C7806 1000P
C7807 470P
C7808 0.022
C7810 100P NPO
C7811 18P NPO
X7801 VSX0173 (10MHz OSC)
C7809 270P
C7812 82P NPO
L7801 10µ
IC7802 SAF1135P
VDD DAR VCS DL CL TEST 2 TEST 1 DL DA
A1 SCL SDA A0 RSTN GND
R7304 10K
R7303 10K
C7821 2700P
R7817 10K
R7818 220
R7809 68K
R7810 22K
C7818 16V10
R7811 3300
R7812 1500
Q7801 2SD636 (AMP)
R7813 1K
Q7802 2SB641 (AMP)
R7814 1K
L7802 100µ
L7803 100µ
C7819 100P NPO
C7820 100P NPO
R7815 1K
R7816 4700
Q7803 2SB641 (BUFFER)
D
C
B
A
1
2
3
4
5
6

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

3-36. VPS C




IC7851
MN158412VYR
X7851
EF0A4R0M03C2
(4.0MHz OSC)
C7853
33P
C7854
33P
VDD
OSC2 OSC1
P33
VSS
SBT SBO SBI XI RST
P03 O P40 I P41 I
P20 P21
C7855
50V1
QR7851
UN1211
or DTC114EA
(INV.)
C7816
25V4.7
C7815
0.1
C7802
0.022
C7801
16V22
C7814
1000P
DAR
VCC DL DA
IC7802
SAF1135P
VDD DAR VCS DL CL TEST 2 TEST 1 DL DA
A1 SCL SDA A0 RSTN GND
ZEL DTB CFD X-TAL DCF GND DL CL
C7808
0.022
C7810
100P
C7811
18P
X7801
VSX0173
(10MHz OSC)
C7807
470P
C7809
270P
C7812
82P
L7801
10µ
R7304
10K
R7303
10K
C7821
2700P
R7811
3300
R7813 1K
R7816
4700
R7817 10K
R7818 220
Q7802
2SB641
(AMP)
R7812
1500
R7814
1K
L7802
100µ
L7803
100µ
C7819
100P
C7820
100P
R7815
1K
Q7803
2SB641
(BUFFER)
NPO
3
4
5
6

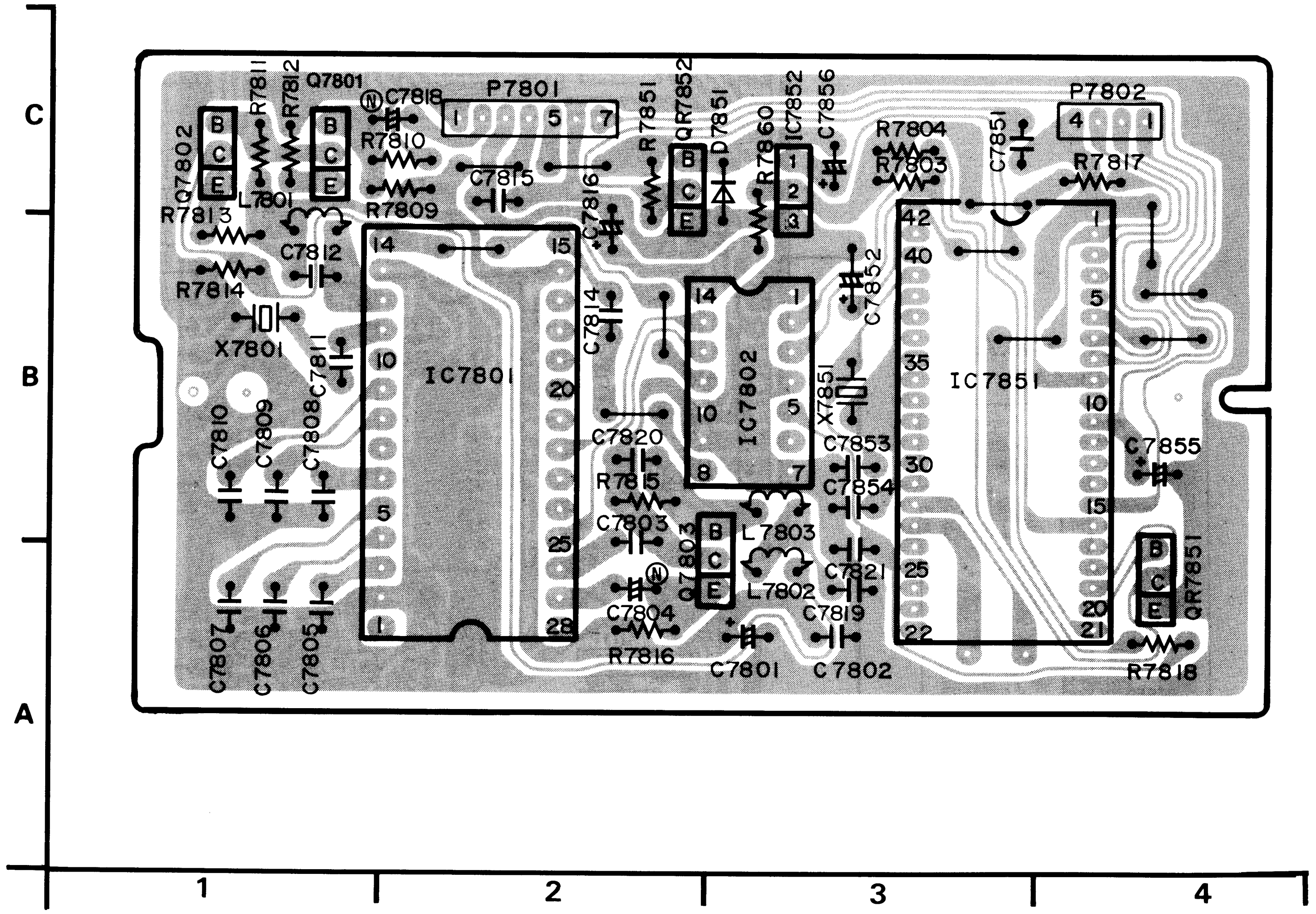
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

C VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

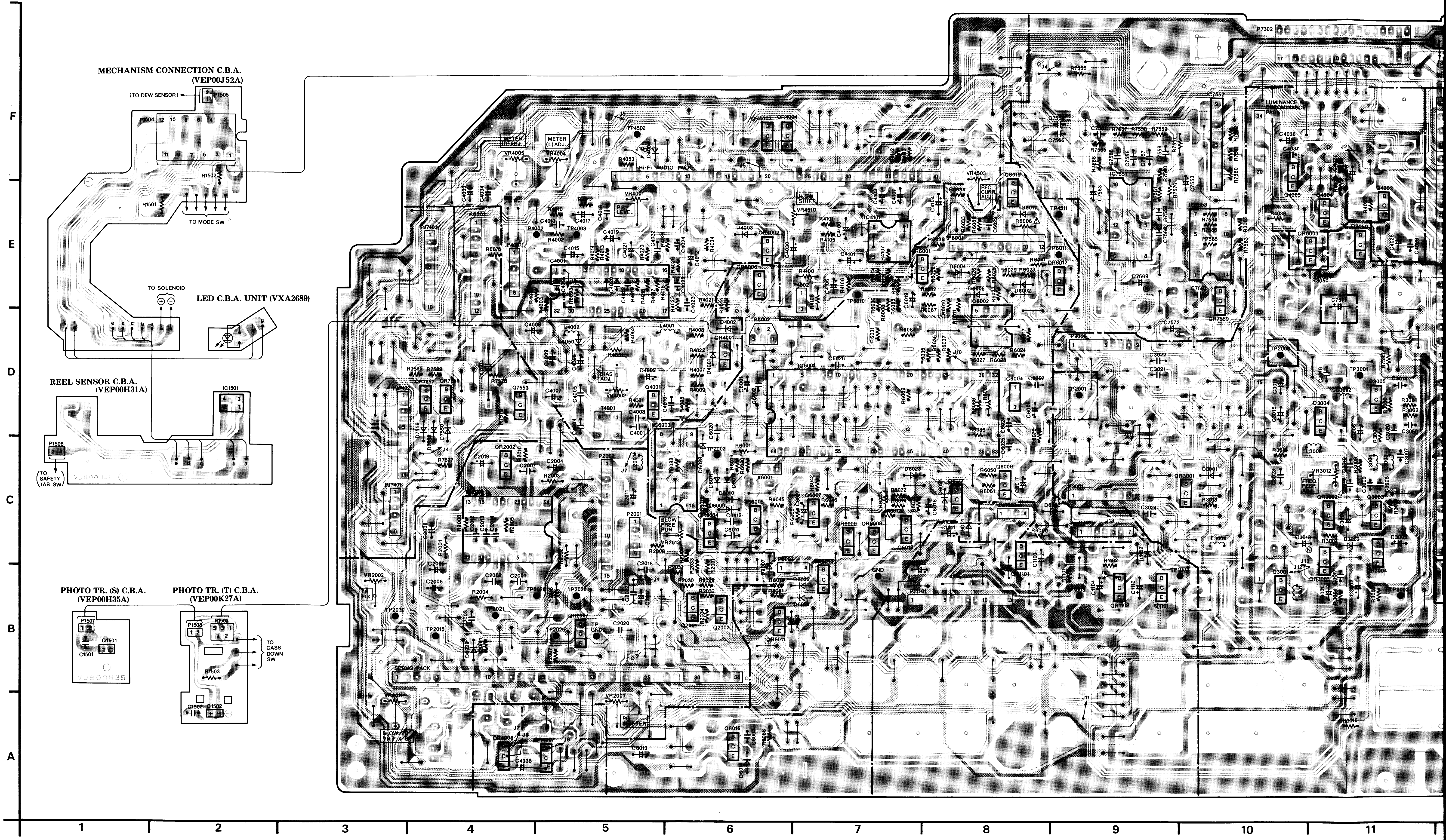
3-36. VPS C.B.A. (VEP07421A)

V.P.S. C.B.A.	
Transistor	
Q7801 Q7802 Q7803	C-1 C-1 A-2
Transistor & Resistor	
QR7851 QR7852	A-4 C-2
Integrated Circuit	
IC7801 IC7802 IC7851 IC7852	B-2 B-3 B-3 C-3
Connector	
P7801 P7802	C-2 C-4

ADDRESS INFORMATION


C
B
A
1
2
3
4
Q7801
Q7802
Q7803
QR7851
QR7852
IC7801
IC7802
IC7851
IC7852
P7801
P7802
X7801
X7851
D7851
L7801
L7802
L7803
R7803
R7804
R7809
R7810
R7811
R7812
R7813
R7814
R7815
R7816
R7817
R7818
R7851
R7860
C7801
C7802
C7803
C7804
C7805
C7806
C7807
C7808
C7809
C7810
C7811
C7812
C7814
C7815
C7816
C7818
C7819
C7820
C7821
C7851
C7852
C7853
C7854
C7855
C7856
B
C
E

3-37. MAIN C.B.A. (VEP03472B)


MECHANISM CONNECTION C.B.A. (VEP00J52A)
(TO DEW SENSOR)
P1505
P1504
R1502
R1501
TO MODE SW
TO SOLENOID
LED C.B.A. UNIT (VXA2689)
REEL SENSOR C.B.A. (VEP00H31A)
IC1501
P1506
TO SAFETY TAB SW
PHOTO TR. (S) C.B.A. (VEP00H35A)
P1507
Q1501
C1501
PHOTO TR. (T) C.B.A. (VEP00K27A)
P1508
P1503
TO CASS. DOWN SW
R1503
C1502
Q1502
METER (R) ADJ.
METER (L) ADJ.
VR4005
VR4004
Hi-Fi AUDIO PACK
P.B LEVEL
BIAS ADJ.
REC CURR ADJ.
H.SW SHIFT
SLOW FREE RUN
SERVO PACK
PG SHIFTER
SLOW V.FIX
V FIX
LUMINANCE & CHROMINANCE PACK
FREQ RESP ADJ.
IC4001
IC6001
IC6003
IC6004
IC4101
IC7551
IC7552
IC7553
P7302
P3002
TP4502
TP4511
TP2001
TP2002
TP3001
TP3002
GND
F
E
D
C
B
A
1
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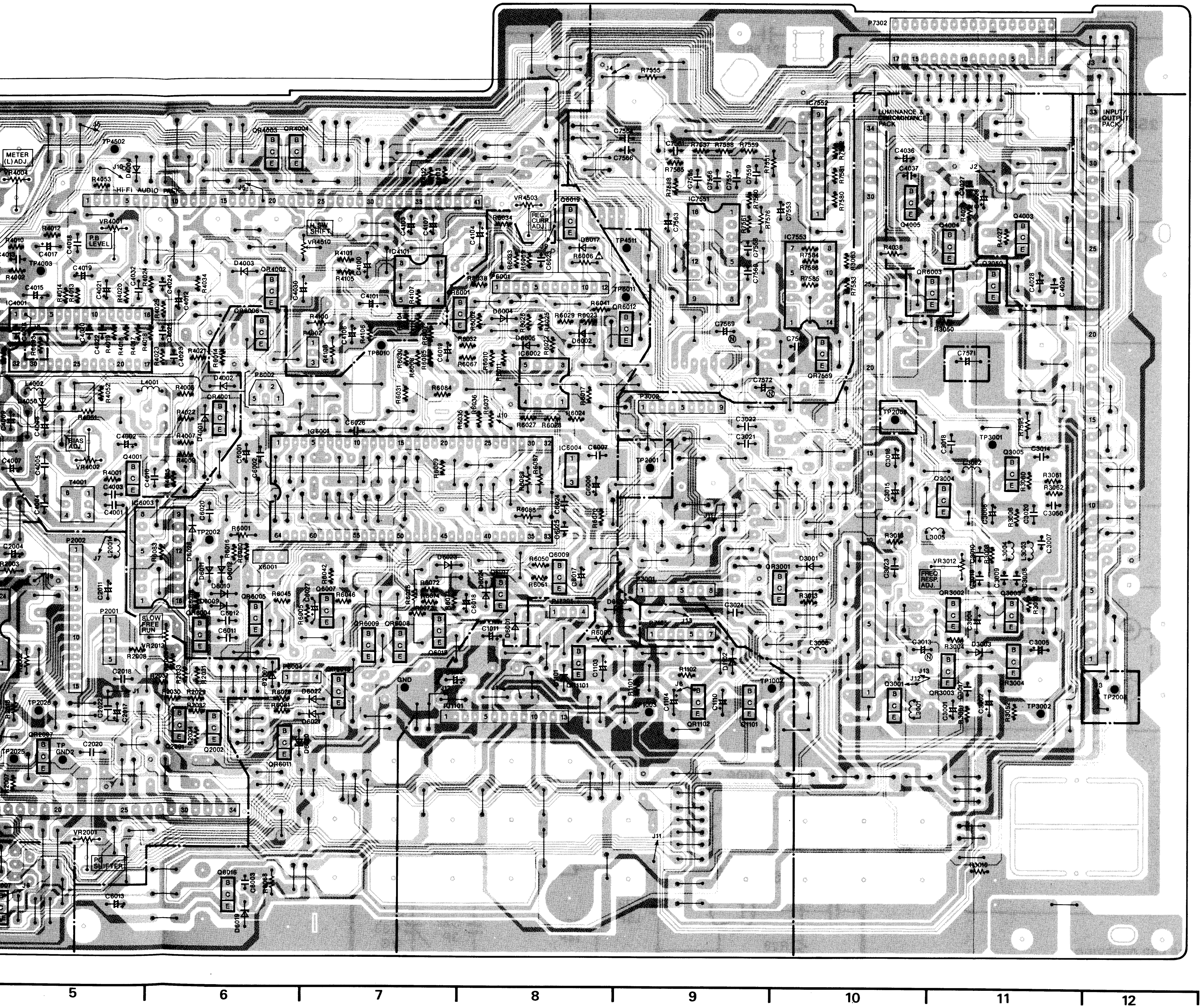
3
4
5
6
7
8
9
10
11



MAIN C.B.A. ADDRESS INFORMATION

POWER SUPPLY SECTION	
Transistor	
Q1101	B-9
Transistor & Resistor	
QR1101	B-8
QR1102	B-9
Test Point	
TP1002	B-10
TP1003	B-9
Connector	
PJ1101	B-7

ADDRESS INFORMATION

SYSTEM CONTROL SECTION	
Transistor	
Q1501	B-1
Q1502	A-2
Q6007	C-2
Q6009	C-8
Q6016	A-6
Q6017	C-8
Q6018	C-7
Q6019	F-8
Transistor & Resistor	
QR6001	E-7
QR6003	E-11
QR6004	C-6
QR6005	C-6
QR6006	E-6
QR6008	C-7
QR6009	C-7
QR6011	B-6
QR6012	E-9
QR6013	C-7
Integrated Circuit	
IC1501	D-2
IC6001	D-7
IC6002	E-8
IC6003	D-5
IC6004	D-8
Test Point	
TP6010	E-7
TP6011	E-9
TP GND	B-7
Connector	
P1503	B-2
P1504	F-2
P1505	F-2
P1506	C-1
P1507	B-1
P1508	B-2
P6001	E-8
P6002	D-6
P6003	E-4
P6004	C-6

ADDRESS INFORMATION

SERVO SECTION	
Transistor	
Q2001	B-6
Q2002	B-6
Transistor & Resistor	
QR2002	C-4
QR2007	B-5
Integrated Circuit	
IC2001	C-4
Test Point	
TP2001	D-9
TP2002	C-6
TP2008	B-12
TP2009	D-10
TP2015	B-4
TP2020	B-5
TP2021	B-4
TP2025	B-5
TP2026	B-5
TP2030	B-3
TP GND2	B-5
Adjustment	
VR2001	A-5
VR2002	B-3
VR2011	A-3
VR2013	C-6
Connector	
P2001	C-5
P2002	C-5

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE SECTION	
Transistor	
Q3001	B-10
Q3003	C-11
Q3004	D-11
Q3005	D-11
Q3050	E-11
Transistor & Resistor	
QR3001	C-10
QR3002	C-11
QR3003	B-11
QR3004	B-11
Test Point	
TP3001	D-11
TP3002	B-11
Adjustment	
VR3012	C-11
Connector	
P3001	C-9
P3002	D-9

ADDRESS INFORMATION

AUDIO SECTION	
Transistor	
Q4001	D-5
Q4003	E-11
Q4004	E-11
Q4005	E-10
Transistor & Resistor	
QR4001	D-6
QR4002	E-6
QR4003	F-6
QR4004	F-6
QR4006	A-4
QR4007	A-5
Integrated Circuit	
IC4001	E-5
IC4101	E-7
Test Point	
TP4002	E-4
TP4003	E-5
TP4502	F-5
TP4511	E-9
Adjustment	
VR4001	E-5
VR4002	D-5
VR4004	F-5
VR4005	F-4
VR4503	F-8
VR4510	E-7
Connector	
P4001	E-4
P4002	E-7

ADDRESS INFORMATION

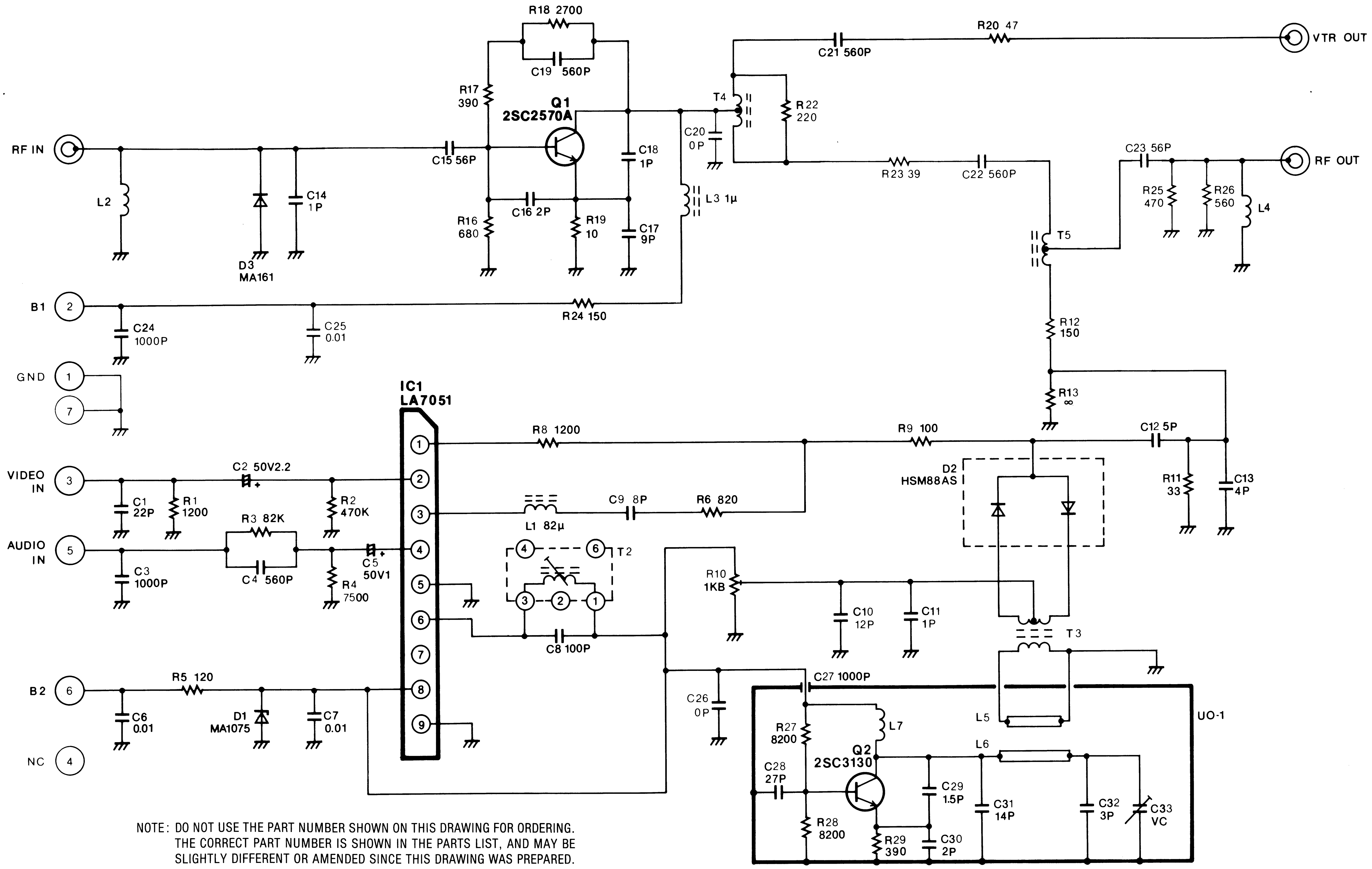
CH SELECT SECTION	
Transistor	
Q7553	D-4
Transistor & Resistor	
QR7556	D-4
QR7557	D-4
QR7559	D-10
Integrated Circuit	
IC7551	F-9
IC7552	F-10
IC7553	E-10
Connector	
P7302	G-10
P7405	C-9
PJ7301	C-8
PJ7401	C-3
PJ7402	D-3
PJ7403	E-4

ADDRESS INFORMATION

Next Page:
RF CONVERTER Section

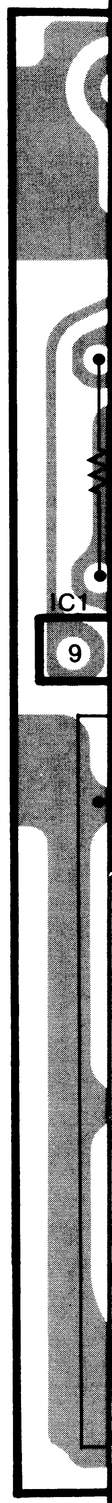
3-38. RF CONVERTER SCHEMATIC DIAGRAM

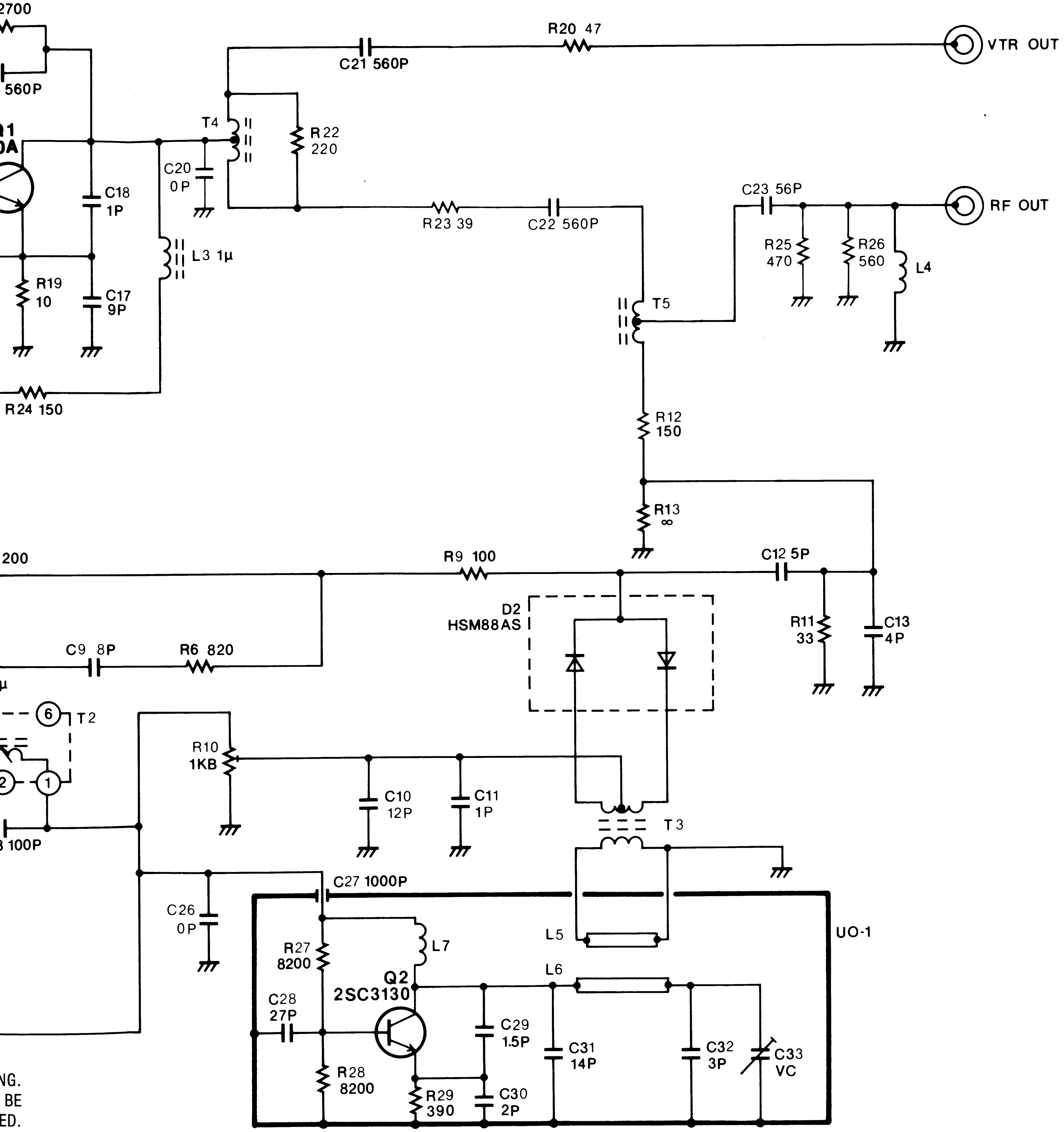
3-39. R



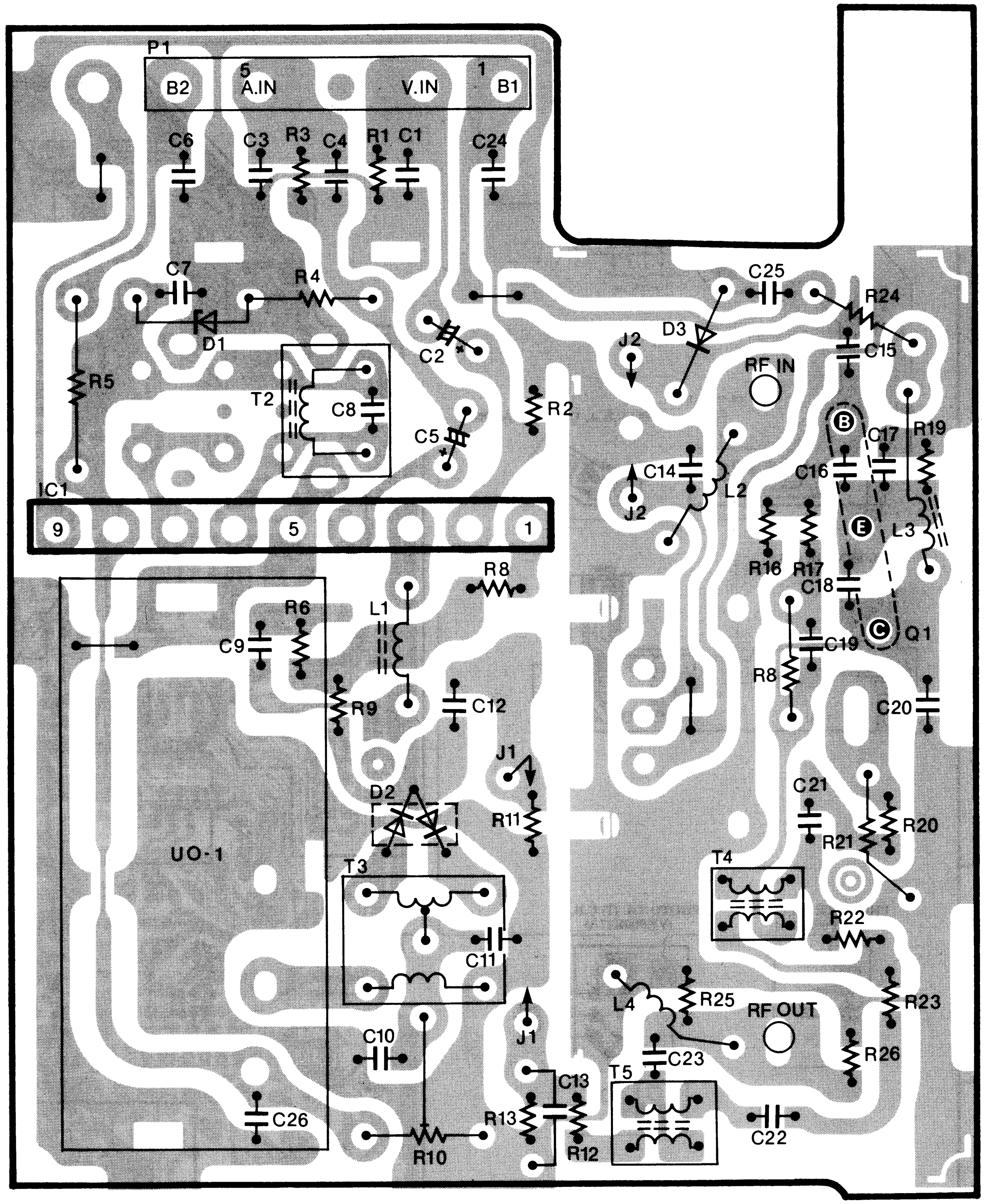
R18 2700
C19 560P
R17 390
Q1 2SC2570A
C18 1P
C17 9P
R19 10
R16 680
C16 2P
C15 56P
RF IN
L2
D3 MA161
C14 1P
C21 560P
R20 47
VTR OUT
T4
R22 220
C20 0P
L3 1µ
R23 39
C22 560P
C23 56P
RF OUT
R25 470
R26 560
L4
T5
B1 2
C24 1000P
C25 0.01
R24 150
R12 150
GND 1
7
R13 ∞
IC1 LA7051
1
2
3
4
5
6
7
8
9
R8 1200
R9 100
C12 5P
R11 33
C13 4P
D2 HSM88AS
VIDEO IN 3
C2 50V2.2
C1 22P
R1 1200
R2 470K
L1 82µ
C9 8P
R6 820
AUDIO IN 5
R3 82K
C4 560P
C3 1000P
R4 7500
C5 50V1
T2
4
6
3
2
1
C8 100P
R10 1KB
C10 12P
C11 1P
T3
B2 6
R5 120
C6 0.01
D1 MA1075
C7 0.01
NC 4
C26 0P
C27 1000P
L5
UO-1
R27 8200
L7
Q2 2SC3130
L6
C28 27P
C29 1.5P
C31 14P
C32 3P
C33 VC
R28 8200
R29 390
C30 2P

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

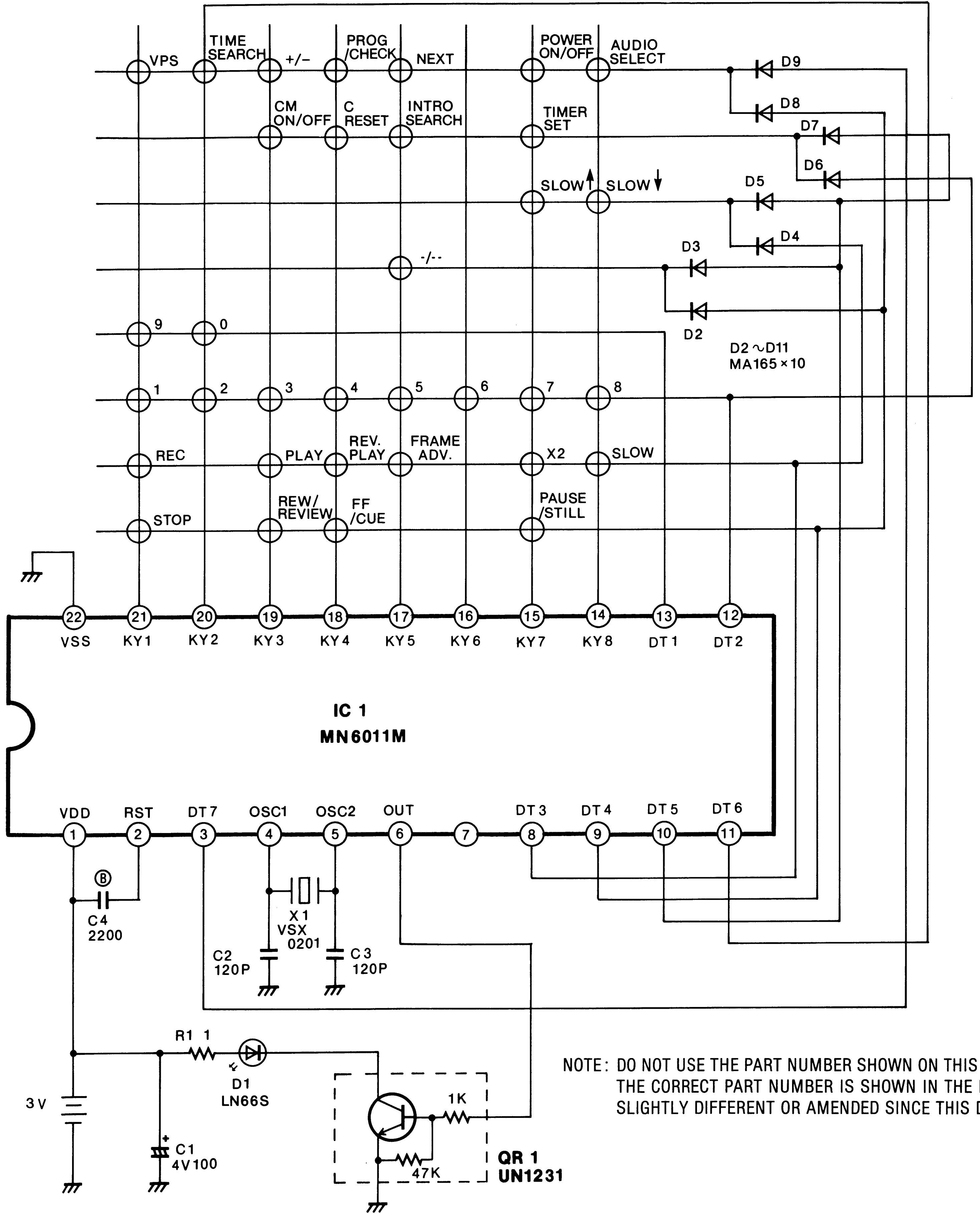



2700
560P
R20 47
C21 560P
VTR OUT
R1
DA
T4
R22
220
C18
1P
C20
0P
L3 1μ
C23 56P
RF OUT
R23 39
C22 560P
R25
470
R26
560
L4
R19
10
C17
9P
T5
R24 150
R12
150
R13
∞
200
R9 100
C12 5P
D2
HSM88AS
R11
33
C13
4P
C9 8P
R6 820
μ
6
T2
R10
1KB
2
1
C10
12P
C11
1P
T3
3 100P
C27 1000P
C26
0P
R27
8200
L7
L5
UO-1
Q2
2SC3130
L6
C28
27P
C29
1.5P
C31
14P
C32
3P
C33
VC
R28
8200
R29
390
C30
2P
NG.
BE
ED.

3-39. RF CONVERTER C.B.A. (ENC87956)

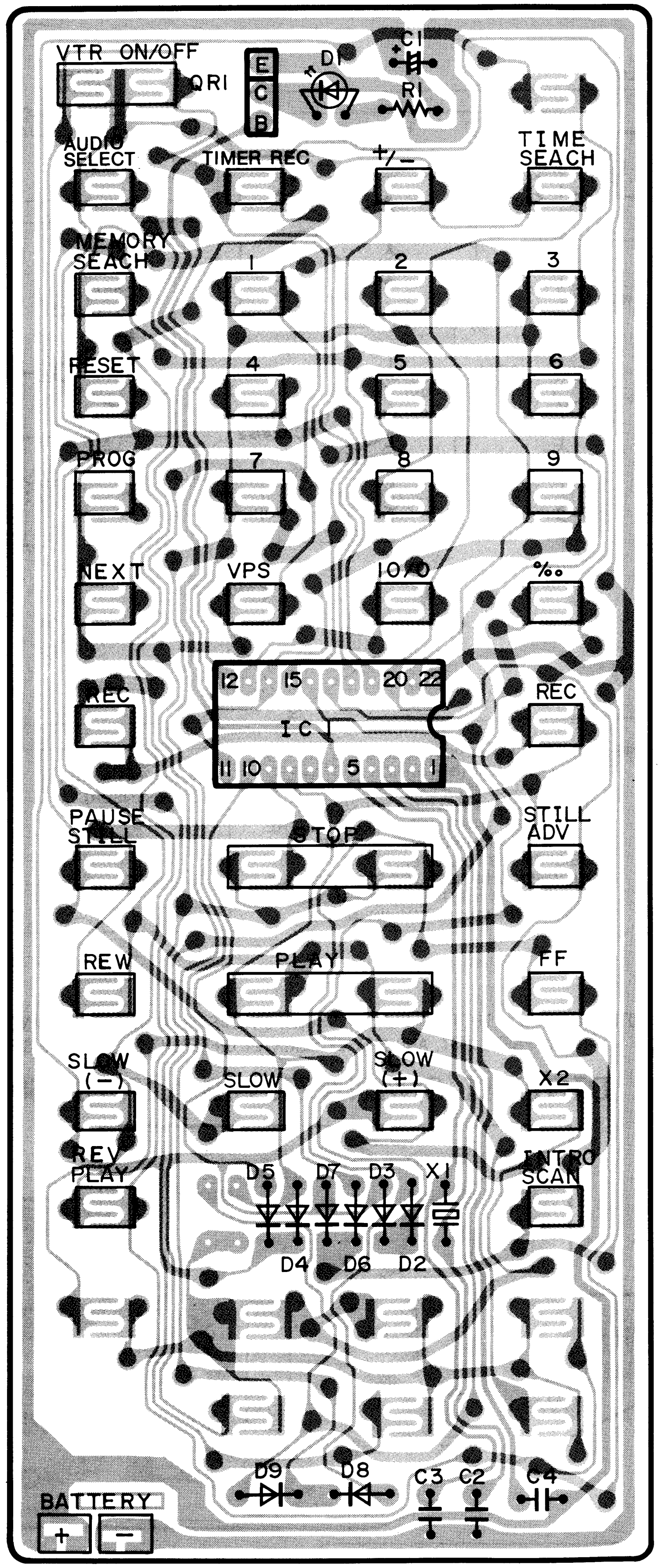

P1
B2
5
A.IN
V.IN
1
B1
C6
C3
R3
C4
R1
C1
C24
C7
R4
D1
C2
C25
R24
D3
J2
C15
RF IN
R5
T2
C8
C5
R2
B
C17
R19
C14
C16
L2
J2
IC1
9
5
1
R16
R17
E
L3
R8
C18
R6
L1
C9
C19
C
Q1
R8
R9
C12
C20
J1
C21
R11
R21
R20
D2
UO-1
T3
T4
R22
C11
L4
R25
RF OUT
R23
C10
J1
C13
T5
C23
R26
C26
R13
R12
R10
C22

3-40. PROGRAMMABLE REMOTE CONTROLLER SCHEMATIC DIAGRAM
— UNIT NO. : VEQ0615 —

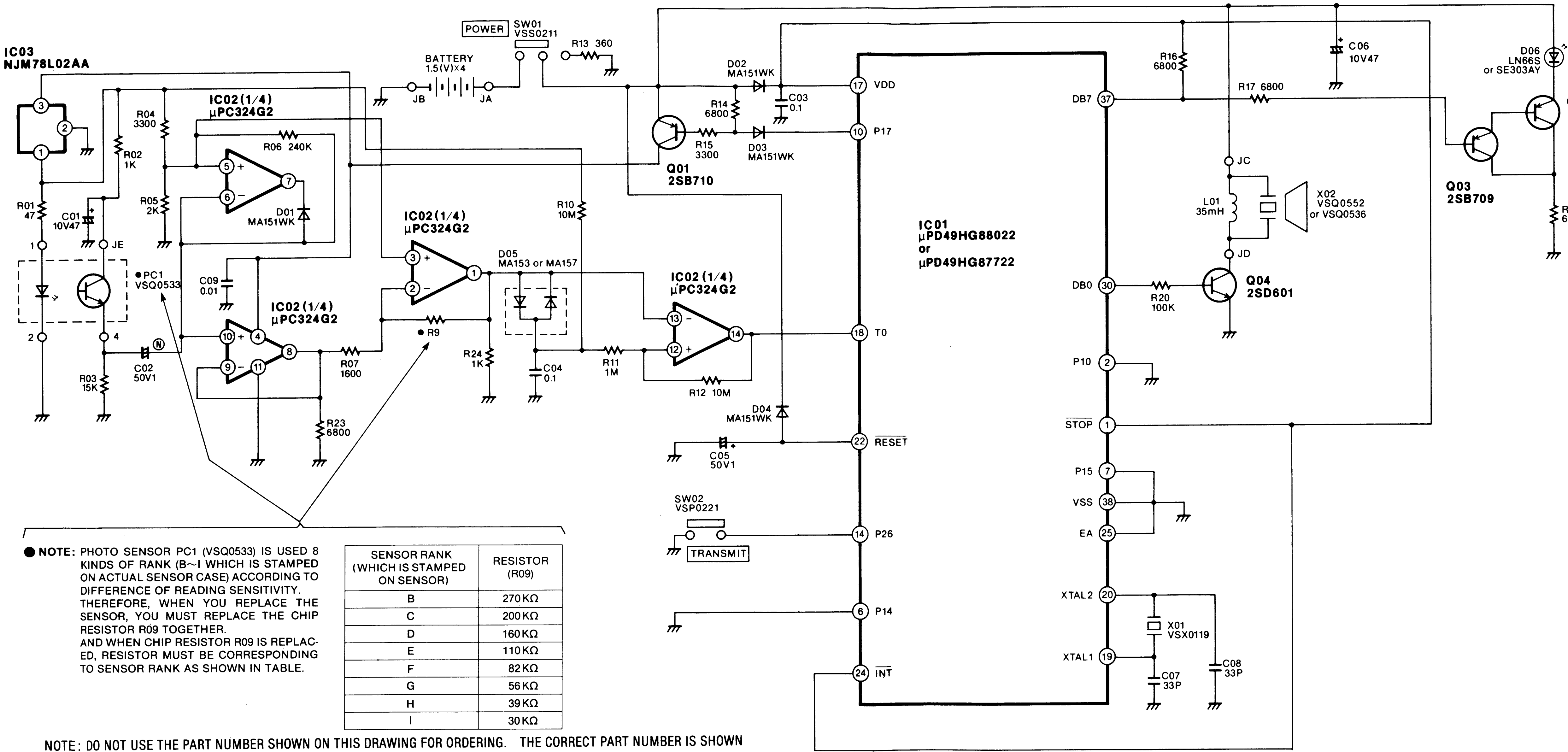

VPS
TIME SEARCH
+/−
PROG /CHECK
NEXT
POWER ON/OFF
AUDIO SELECT
D9
CM ON/OFF
C RESET
INTRO SEARCH
TIMER SET
D8
D7
D6
SLOW↑
SLOW↓
D5
D4
D3
-/--
D2
9
0
D2 ~ D11
MA165 × 10
1
2
3
4
5
6
7
8
REC
PLAY
REV. PLAY
FRAME ADV.
X2
SLOW
STOP
REW/ REVIEW
FF /CUE
PAUSE /STILL
22
21
20
19
18
17
16
15
14
13
12
VSS
KY1
KY2
KY3
KY4
KY5
KY6
KY7
KY8
DT1
DT2
IC 1
MN6011M
VDD
RST
DT7
OSC1
OSC2
OUT
DT3
DT4
DT5
DT6
1
2
3
4
5
6
7
8
9
10
11
Ⓑ
C4
2200
X1
VSX
0201
C2
120P
C3
120P
R1 1
D1
LN66S
3V
C1
4V100
1K
47K
QR 1
UN1231

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

3-41. PROGRAMMABLE REMOTE CONTROLLER C.B.A. (VEP66030A)


VTR ON/OFF
E
C
B
QR1
D1
C1
R1
AUDIO SELECT
TIMER REC
+/−
TIME SEACH
MEMORY SEACH
1
2
3
RESET
4
5
6
PROG
7
8
9
NEXT
VPS
10/0
%o
REC
12
15
20
22
IC1
11
10
5
1
REC
PAUSE STILL
STOP
STILL ADV
REW
PLAY
FF
SLOW (−)
SLOW
SLOW (+)
X2
REV PLAY
D5
D7
D3
X1
INTRO SCAN
D4
D6
D2
D9
D8
C3
C2
C4
BATTERY
+
−

3-42. DIGITAL SCANNER SCHEMATIC DIAGRAM
— UNIT NO.: VEQ0549 —

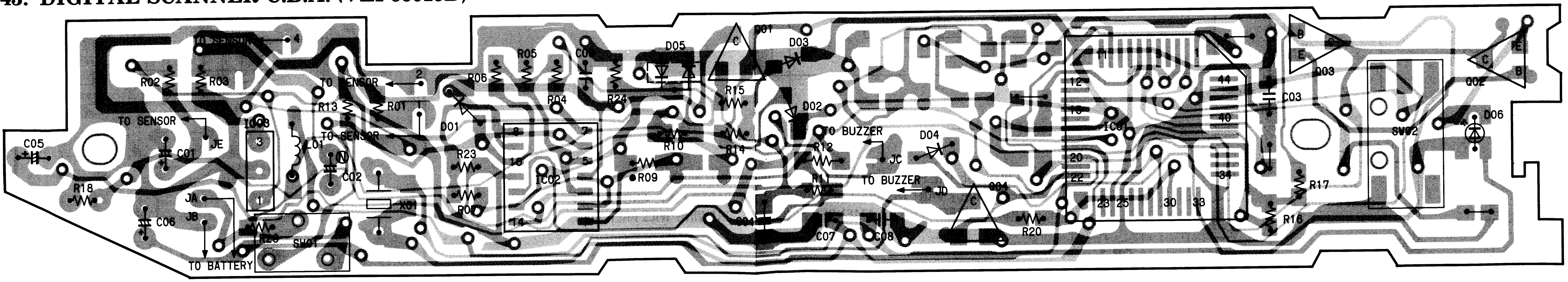

IC03
NJM78L02AA
POWER
SW01
VSS0211
R13 360
BATTERY
1.5(V)×4
JB
JA
IC02 (1/4)
µPC324G2
R04
3300
R02
1K
R05
2K
R06 240K
D01
MA151WK
R01
47
C01
10V47
JE
●PC1
VSQ0533
C09
0.01
C02
50V1
R03
15K
R07
1600
R23
6800
● R9
R24
1K
D05
MA153 or MA157
C04
0.1
R10
10M
R11
1M
R12 10M
D02
MA151WK
R14
6800
R15
3300
D03
MA151WK
C03
0.1
Q01
2SB710
D04
MA151WK
C05
50V1
SW02
VSP0221
TRANSMIT
IC01
µPD49HG88022
or
µPD49HG87722
VDD
P17
T0
RESET
P26
P14
INT
DB7
DB0
P10
STOP
P15
VSS
EA
XTAL2
XTAL1
R16
6800
R17 6800
C06
10V47
JC
L01
35mH
X02
VSQ0552
or VSQ0536
JD
R20
100K
Q04
2SD601
X01
VSX0119
C07
33P
C08
33P
D06
LN66S
or SE303AY
Q02
2SB710
Q03
2SB709
R18
6.8

● **NOTE:** PHOTO SENSOR PC1 (VSQ0533) IS USED 8 KINDS OF RANK (B~I WHICH IS STAMPED ON ACTUAL SENSOR CASE) ACCORDING TO DIFFERENCE OF READING SENSITIVITY.
THEREFORE, WHEN YOU REPLACE THE SENSOR, YOU MUST REPLACE THE CHIP RESISTOR R09 TOGETHER.
AND WHEN CHIP RESISTOR R09 IS REPLACED, RESISTOR MUST BE CORRESPONDING TO SENSOR RANK AS SHOWN IN TABLE.

SENSOR RANK (WHICH IS STAMPED ON SENSOR)	RESISTOR (R09)
B	270KΩ
C	200KΩ
D	160KΩ
E	110KΩ
F	82KΩ
G	56KΩ
H	39KΩ
I	30KΩ

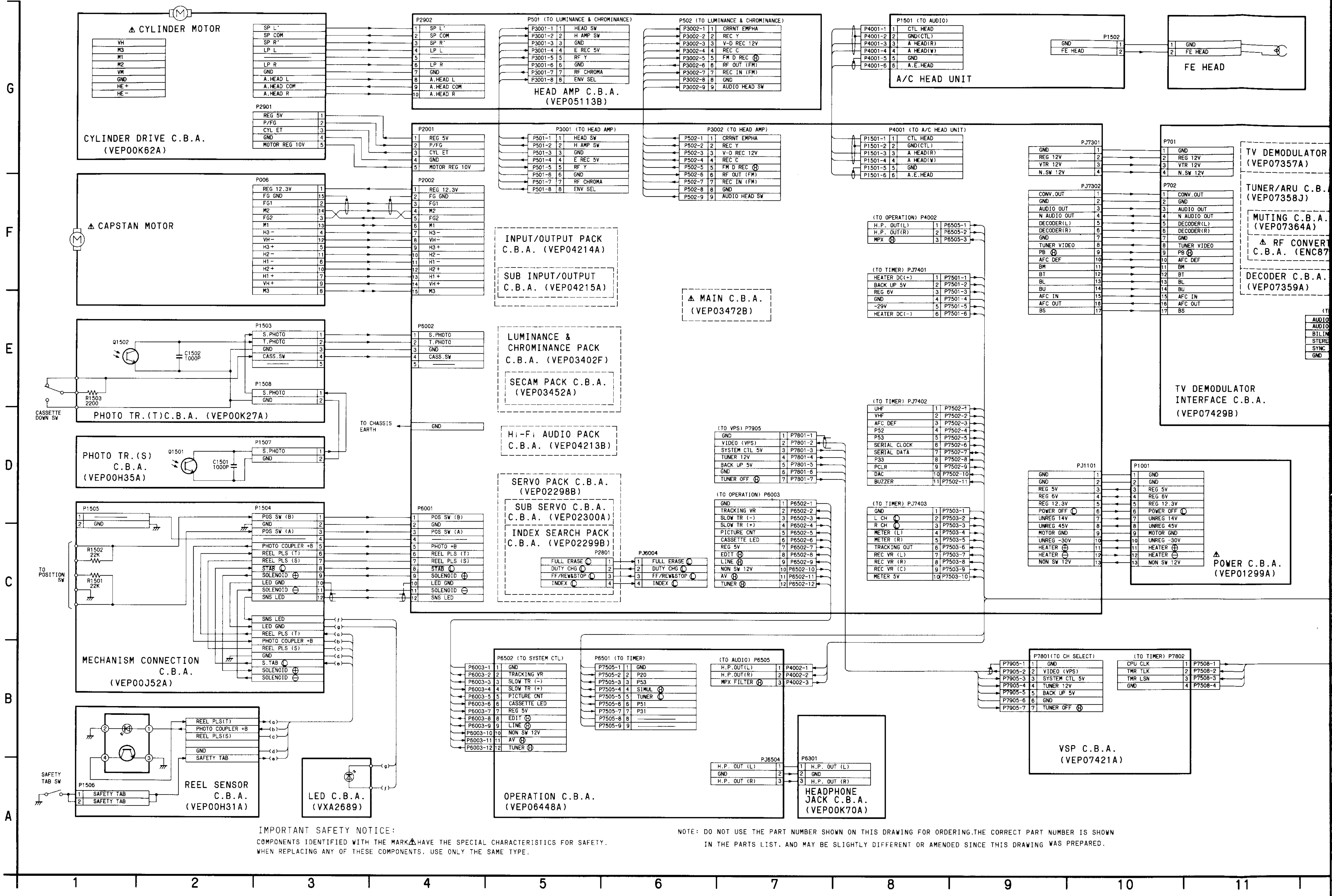
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

3-43. DIGITAL SCANNER C.B.A. (VEP66019D)


TO SENSOR
R02
R03
C05
C01
JE
IC03
L01
C02
R18
JA
JB
C06
TO BATTERY
R26
SW01
TO SENSOR
R13
R01
X01
D01
R23
R06
R05
R04
R24
IC02
R09
D05
R15
R10
R14
D03
D02
R12
R11
TO BUZZER
JC
JD
D04
Q04
Q01
C07
C08
R20
IC01
C03
Q03
Q02
SW02
D06
R17
R16

Back Page:
REMOTE CONTROLLER Section

3-44. INTERCONNECTION SCHEMATIC DIAGRAM

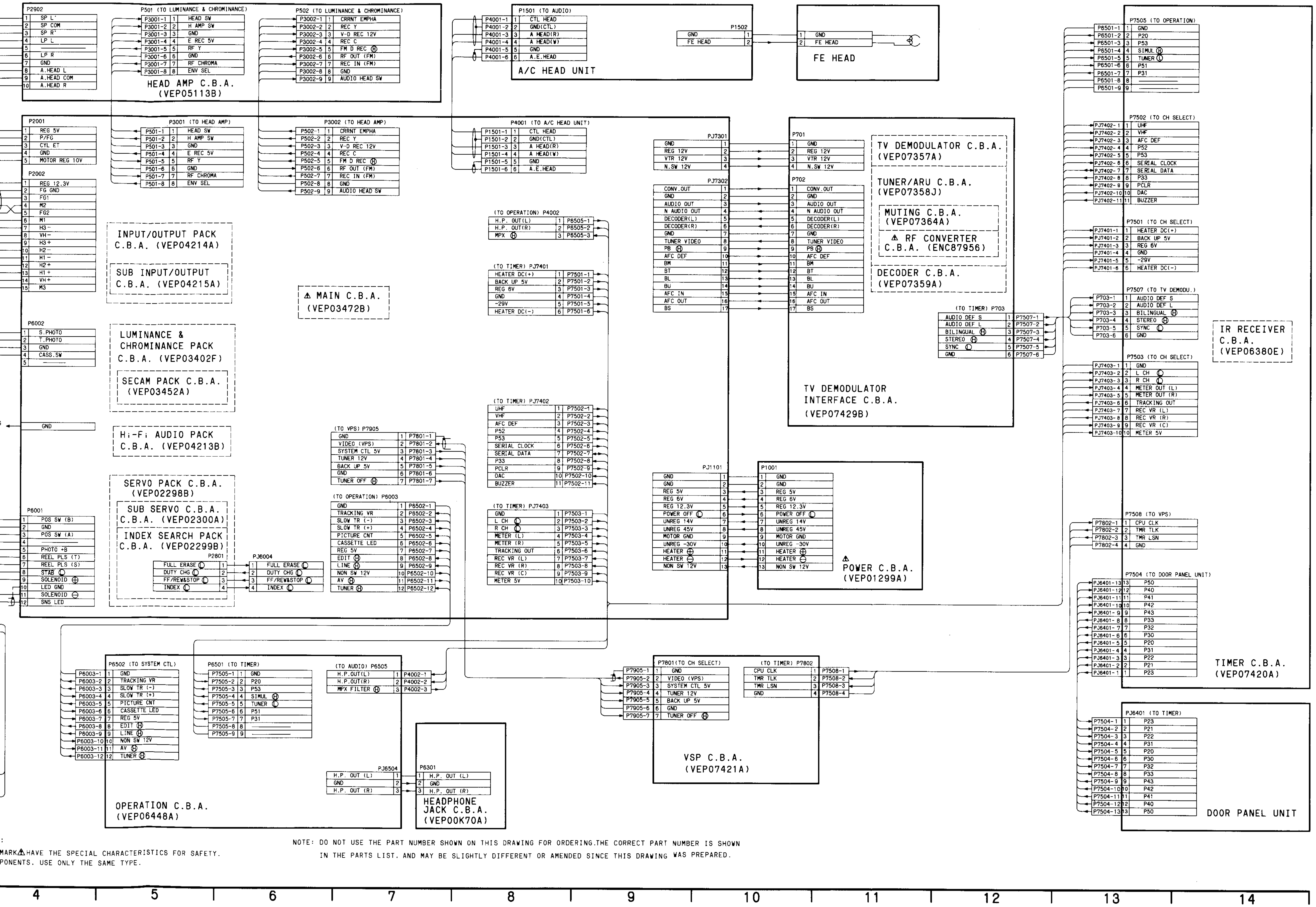


⚠ CYLINDER MOTOR
VH
M3
M1
M2
VM
GND
HE+
HE−
SP L'
SP COM
SP R'
LP L
LP R
GND
A.HEAD L
A.HEAD COM
A.HEAD R
P2901
REG 5V
P/FG
CYL ET
GND
MOTOR REG 10V
CYLINDER DRIVE C.B.A.
(VEP00K62A)
P006
REG 12.3V
FG GND
FG1
M2
FG2
M1
H3−
VH−
H3+
H2−
H1−
H2+
H1+
VH+
M3
⚠ CAPSTAN MOTOR
P1503
S.PHOTO
T.PHOTO
GND
CASS.SW
Q1502
C1502 1000P
P1508
S.PHOTO
GND
R1503 2200
CASSETTE DOWN SW
PHOTO TR.(T)C.B.A. (VEP00K27A)
TO CHASSIS EARTH
PHOTO TR.(S) C.B.A. (VEP00H35A)
Q1501
C1501 1000P
P1507
S.PHOTO
GND
P1505
GND
P1504
POS SW (B)
GND
POS SW (A)
PHOTO COUPLER +B
REEL PLS (T)
REEL PLS (S)
STAB
SOLENOID ⊕
LED GND
SOLENOID ⊖
SNS LED
R1502 22K
R1501 22K
TO POSITION SW
SNS LED
LED GND
REEL PLS (T)
PHOTO COUPLER +B
REEL PLS (S)
GND
S.TAB
SOLENOID ⊕
SOLENOID ⊖
MECHANISM CONNECTION C.B.A. (VEP00J52A)
REEL PLS(T)
PHOTO COUPLER +B
REEL PLS(S)
GND
SAFETY TAB
SAFETY TAB SW
P1506
SAFETY TAB
SAFETY TAB
REEL SENSOR C.B.A. (VEP00H31A)
LED C.B.A. (VXA2689)
P2902
SP L'
SP COM
SP R'
LP L
LP R
GND
A.HEAD L
A.HEAD COM
A.HEAD R
P501 (TO LUMINANCE & CHROMINANCE)
P3001-1 HEAD SW
P3001-2 H AMP SW
P3001-3 GND
P3001-4 E REC 5V
P3001-5 RF Y
P3001-6 GND
P3001-7 RF CHROMA
P3001-8 ENV SEL
HEAD AMP C.B.A. (VEP05113B)
P502 (TO LUMINANCE & CHROMINANCE)
P3002-1 CRRNT EMPHA
P3002-2 REC Y
P3002-3 V-D REC 12V
P3002-4 REC C
P3002-5 FM D REC ⊕
P3002-6 RF OUT (FM)
P3002-7 REC IN (FM)
P3002-8 GND
P3002-9 AUDIO HEAD SW
P4001-1
P4001-2
P4001-3
P4001-4
P4001-5
P4001-6
P1501 (TO AUDIO)
CTL HEAD
GND(CTL)
A HEAD(R)
A HEAD(W)
GND
A.E.HEAD
A/C HEAD UNIT
P1502
GND
FE HEAD
FE HEAD
P2001
REG 5V
P/FG
CYL ET
GND
MOTOR REG 10V
P2002
REG 12.3V
FG GND
FG1
M2
FG2
M1
H3−
VH−
H3+
H2−
H1−
H2+
H1+
VH+
M3
P3001 (TO HEAD AMP)
P501-1 HEAD SW
P501-2 H AMP SW
P501-3 GND
P501-4 E REC 5V
P501-5 RF Y
P501-6 GND
P501-7 RF CHROMA
P501-8 ENV SEL
P3002 (TO HEAD AMP)
P502-1 CRRNT EMPHA
P502-2 REC Y
P502-3 V-D REC 12V
P502-4 REC C
P502-5 FM D REC ⊕
P502-6 RF OUT (FM)
P502-7 REC IN (FM)
P502-8 GND
P502-9 AUDIO HEAD SW
P4001 (TO A/C HEAD UNIT)
P1501-1 CTL HEAD
P1501-2 GND(CTL)
P1501-3 A HEAD(R)
P1501-4 A HEAD(W)
P1501-5 GND
P1501-6 A.E.HEAD
INPUT/OUTPUT PACK C.B.A. (VEP04214A)
SUB INPUT/OUTPUT C.B.A. (VEP04215A)
⚠ MAIN C.B.A. (VEP03472B)
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03402F)
SECAM PACK C.B.A. (VEP03452A)
Hi-Fi AUDIO PACK C.B.A. (VEP04213B)
SERVO PACK C.B.A. (VEP02298B)
SUB SERVO C.B.A. (VEP02300A)
INDEX SEARCH PACK C.B.A. (VEP02299B)
P2801
FULL ERASE
DUTY CHG
FF/REW&STOP
INDEX
PJ6004
FULL ERASE
DUTY CHG
FF/REW&STOP
INDEX
P5002
S.PHOTO
T.PHOTO
GND
CASS.SW
GND
P6001
POS SW (B)
GND
POS SW (A)
PHOTO +B
REEL PLS (T)
REEL PLS (S)
STAB
SOLENOID ⊕
LED GND
SOLENOID ⊖
SNS LED
(TO OPERATION) P4002
H.P. OUT(L) P6505-1
H.P. OUT(R) P6505-2
MPX ⊕ P6505-3
(TO TIMER) PJ7401
HEATER DC(+) P7501-1
BACK UP 5V P7501-2
REG 6V P7501-3
GND P7501-4
−29V P7501-5
HEATER DC(−) P7501-6
(TO TIMER) PJ7402
UHF P7502-1
VHF P7502-2
AFC DEF P7502-3
P52 P7502-4
P53 P7502-5
SERIAL CLOCK P7502-6
SERIAL DATA P7502-7
P33 P7502-8
PCLR P7502-9
DAC P7502-10
BUZZER P7502-11
(TO TIMER) PJ7403
GND P7503-1
L CH P7503-2
R CH P7503-3
METER (L) P7503-4
METER (R) P7503-5
TRACKING OUT P7503-6
REC VR (L) P7503-7
REC VR (R) P7503-8
REC VR (C) P7503-9
METER 5V P7503-10
(TO VPS) P7905
GND P7801-1
VIDEO (VPS) P7801-2
SYSTEM CTL 5V P7801-3
TUNER 12V P7801-4
BACK UP 5V P7801-5
GND P7801-6
TUNER OFF ⊕ P7801-7
(TO OPERATION) P6003
GND P6502-1
TRACKING VR P6502-2
SLOW TR (−) P6502-3
SLOW TR (+) P6502-4
PICTURE CNT P6502-5
CASSETTE LED P6502-6
REG 5V P6502-7
EDIT ⊕ P6502-8
LINE ⊕ P6502-9
NON SW 12V P6502-10
AV ⊕ P6502-11
TUNER ⊕ P6502-12
PJ7301
GND
REG 12V
VTR 12V
N.SW 12V
PJ7302
CONV.OUT
GND
AUDIO OUT
N AUDIO OUT
DECODER(L)
DECODER(R)
GND
TUNER VIDEO
PB ⊕
AFC DEF
BM
BT
BL
BU
AFC IN
AFC OUT
BS
P701
GND
REG 12V
VTR 12V
N.SW 12V
P702
CONV.OUT
GND
AUDIO OUT
N AUDIO OUT
DECODER(L)
DECODER(R)
GND
TUNER VIDEO
PB ⊕
AFC DEF
BM
BT
BL
BU
AFC IN
AFC OUT
BS
TV DEMODULATOR (VEP07357A)
TUNER/ARU C.B. (VEP07358J)
MUTING C.B.A. (VEP07364A)
⚠ RF CONVERT C.B.A. (ENC87
DECODER C.B.A. (VEP07359A)
AUDIO
AUDIO
BILIN
STERE
SYNC
GND
TV DEMODULATOR INTERFACE C.B.A. (VEP07429B)
PJ1101
GND
GND
REG 5V
REG 6V
REG 12.3V
POWER OFF
UNREG 14V
UNREG 45V
MOTOR GND
UNREG −30V
HEATER ⊕
HEATER ⊖
NON SW 12V
P1001
GND
GND
REG 5V
REG 6V
REG 12.3V
POWER OFF
UNREG 14V
UNREG 45V
MOTOR GND
UNREG −30V
HEATER ⊕
HEATER ⊖
NON SW 12V
⚠ POWER C.B.A. (VEP01299A)
P6502 (TO SYSTEM CTL)
P6003-1 GND
P6003-2 TRACKING VR
P6003-3 SLOW TR (−)
P6003-4 SLOW TR (+)
P6003-5 PICTURE CNT
P6003-6 CASSETTE LED
P6003-7 REG 5V
P6003-8 EDIT ⊕
P6003-9 LINE ⊕
P6003-10 NON SW 12V
P6003-11 AV ⊕
P6003-12 TUNER ⊕
P6501 (TO TIMER)
P7505-1 GND
P7505-2 P20
P7505-3 P53
P7505-4 SIMUL ⊕
P7505-5 TUNER ⊕
P7505-6 P51
P7505-7 P31
P7505-8
P7505-9
(TO AUDIO) P6505
H.P.OUT(L) P4002-1
H.P.OUT(R) P4002-2
MPX FILTER ⊕ P4002-3
PJ6504
H.P. OUT (L)
GND
H.P. OUT (R)
OPERATION C.B.A. (VEP06448A)
P6301
H.P. OUT (L)
GND
H.P. OUT (R)
HEADPHONE JACK C.B.A. (VEP00K70A)
P7801 (TO CH SELECT)
P7905-1 GND
P7905-2 VIDEO (VPS)
P7905-3 SYSTEM CTL 5V
P7905-4 TUNER 12V
P7905-5 BACK UP 5V
P7905-6 GND
P7905-7 TUNER OFF ⊕
VSP C.B.A. (VEP07421A)
(TO TIMER) P7802
CPU CLK P7508-1
TMR TLK P7508-2
TMR LSN P7508-3
GND P7508-4
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK⚠HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DIAGRAM


P2902
P501 (TO LUMINANCE & CHROMINANCE)
P502 (TO LUMINANCE & CHROMINANCE)
HEAD AMP C.B.A. (VEP05113B)
P1501 (TO AUDIO)
A/C HEAD UNIT
P1502
FE HEAD
P7505 (TO OPERATION)
P2001
P3001 (TO HEAD AMP)
P3002 (TO HEAD AMP)
P4001 (TO A/C HEAD UNIT)
PJ7301
P701
TV DEMODULATOR C.B.A. (VEP07357A)
TUNER/ARU C.B.A. (VEP07358J)
MUTING C.B.A. (VEP07364A)
⚠ RF CONVERTER C.B.A. (ENC87956)
DECODER C.B.A. (VEP07359A)
P7502 (TO CH SELECT)
P2002
PJ7302
P702
(TO OPERATION) P4002
INPUT/OUTPUT PACK C.B.A. (VEP04214A)
SUB INPUT/OUTPUT C.B.A. (VEP04215A)
(TO TIMER) PJ7401
P7501 (TO CH SELECT)
⚠ MAIN C.B.A. (VEP03472B)
(TO TIMER) P703
P7507 (TO TV DEMODU.)
IR RECEIVER C.B.A. (VEP06380E)
P6002
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03402F)
SECAM PACK C.B.A. (VEP03452A)
P7503 (TO CH SELECT)
TV DEMODULATOR INTERFACE C.B.A. (VEP07429B)
(TO TIMER) PJ7402
Hi-Fi AUDIO PACK C.B.A. (VEP04213B)
(TO VPS) P7905
PJ1101
P1001
SERVO PACK C.B.A. (VEP02298B)
SUB SERVO C.B.A. (VEP02300A)
INDEX SEARCH PACK C.B.A. (VEP02299B)
(TO OPERATION) P6003
(TO TIMER) PJ7403
P7508 (TO VPS)
P6001
P2801
PJ6004
⚠ POWER C.B.A. (VEP01299A)
P7504 (TO DOOR PANEL UNIT)
TIMER C.B.A. (VEP07420A)
P6502 (TO SYSTEM CTL)
P6501 (TO TIMER)
(TO AUDIO) P6505
P7801 (TO CH SELECT)
(TO TIMER) P7802
PJ6401 (TO TIMER)
PJ6504
P6301
OPERATION C.B.A. (VEP06448A)
HEADPHONE JACK C.B.A. (VEP00K70A)
VSP C.B.A. (VEP07421A)
DOOR PANEL UNIT
4
5
6
7
8
9
10
11
12
13
14

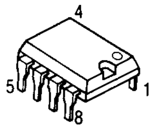
:
MARK⚠HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
PONENTS. USE ONLY THE SAME TYPE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

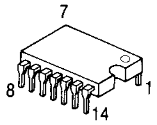
Next Page:
ICs & TRs INFORMATION Section

3-45. ICs & TRs INFORMATION

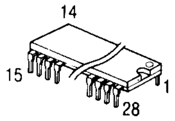
GENERAL CIRCUIT PARTS



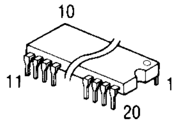
µPC393C
AN6558
µPC358C



µPD4013BC
µPD4069UBC
µPD4066BC
µPD4001BC



SAA5235
TDA3803A
µPD6160CA606



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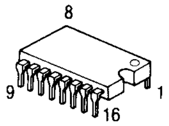

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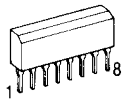

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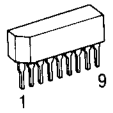

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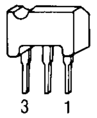

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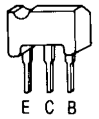

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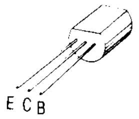

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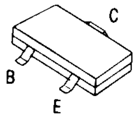

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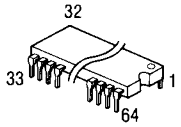

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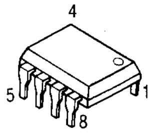

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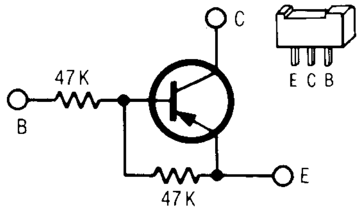
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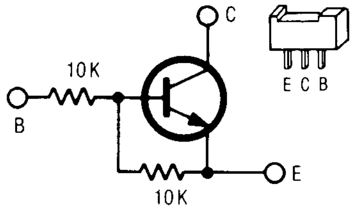
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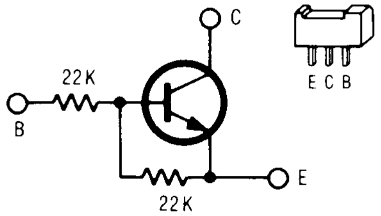
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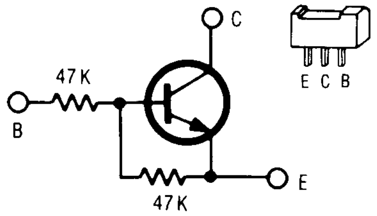
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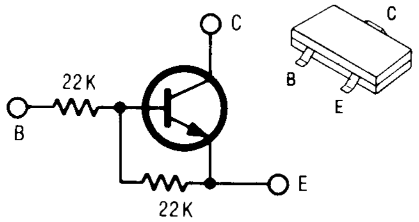
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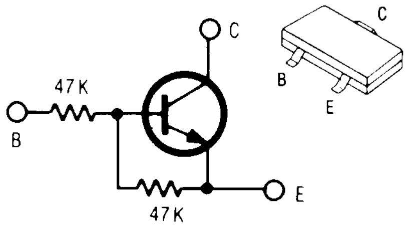
UN2212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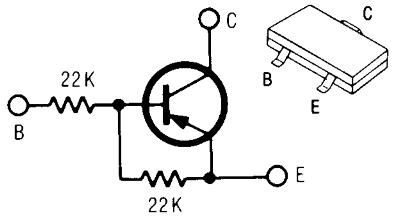
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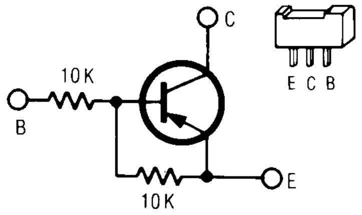
UN2112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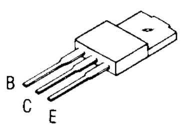
DTA114EA

SYSTEM CONTROL Section



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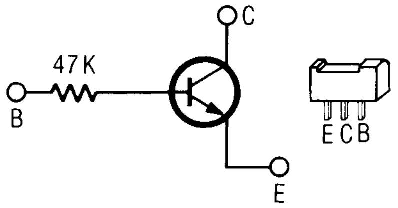
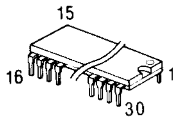


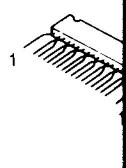
UN1210

TIMER



BA6800AS

LUMINANCE



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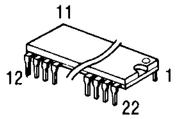

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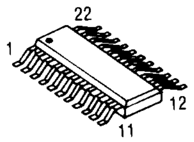
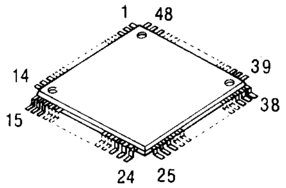


AN3311S

FM AUDIO PACK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µPC2306GH
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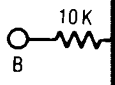
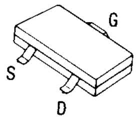
LUMINANCE



TV DEMODULATOR



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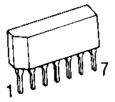

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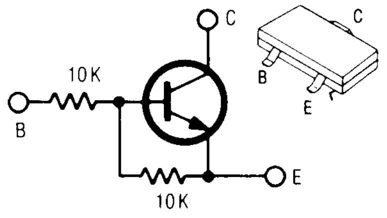
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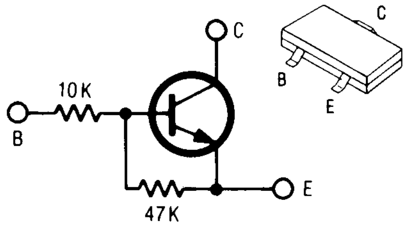
10K
C
B
E

UN2211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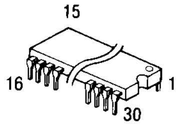
UN2214



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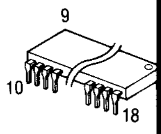
SERVO Section



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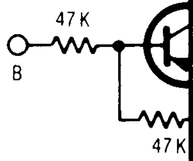

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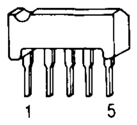
INPUT/OUTPUT PACK



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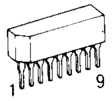
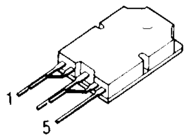


TA7348P

POWER Section



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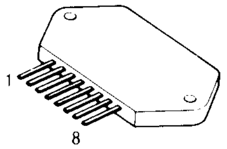

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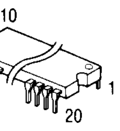

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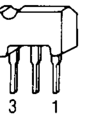

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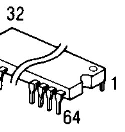

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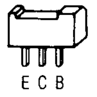
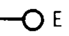
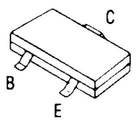
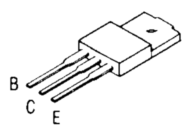






SYSTEM CONTROL Section



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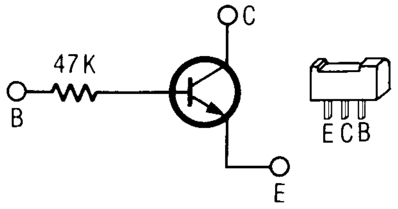
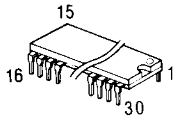


UN1210

TIMER



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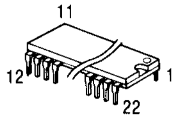
HEAD AMP



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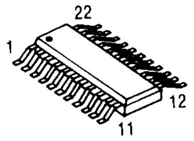
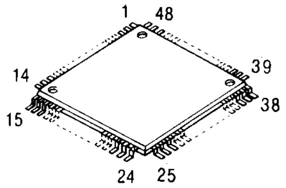


AN3311S

FM AUDIO PACK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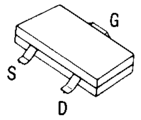
TV DEMODULATOR



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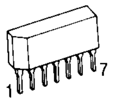

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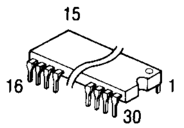

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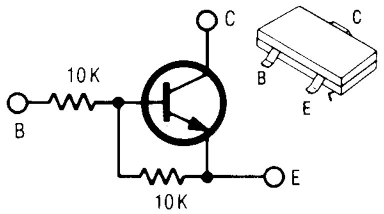
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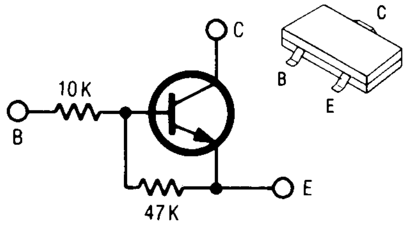
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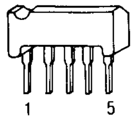
UN2214

INPUT/OUTPUT PACK



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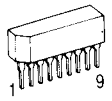
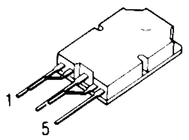
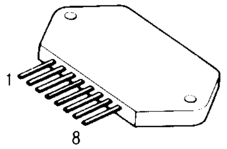


TA7348P

POWER Section

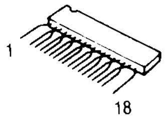


STRD1806



STK5337

LUMINANCE & CHROMINANCE PACK



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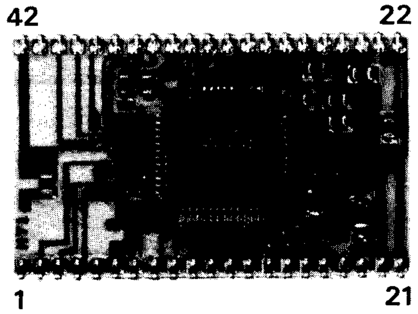
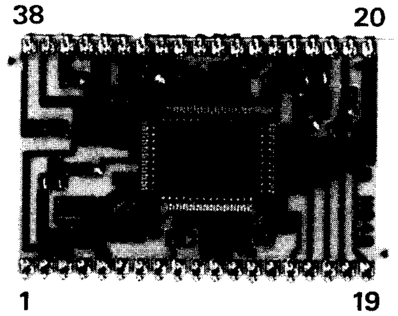
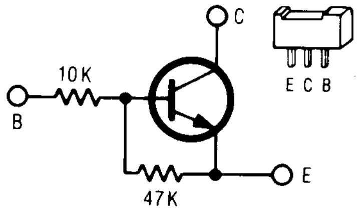


VEFH03A



VEFH04A

LUMINANCE & CHROMINANCE Section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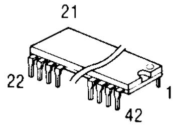
VPS



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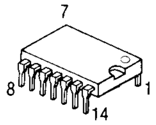
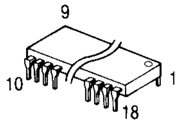


SAF1135P

SERVO Section



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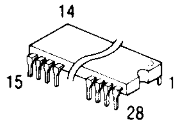

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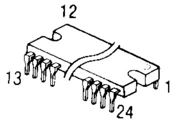
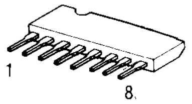


BA6430S



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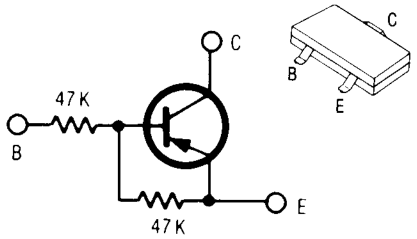
C
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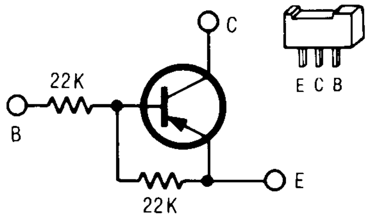
AUDIO Section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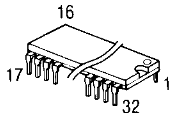
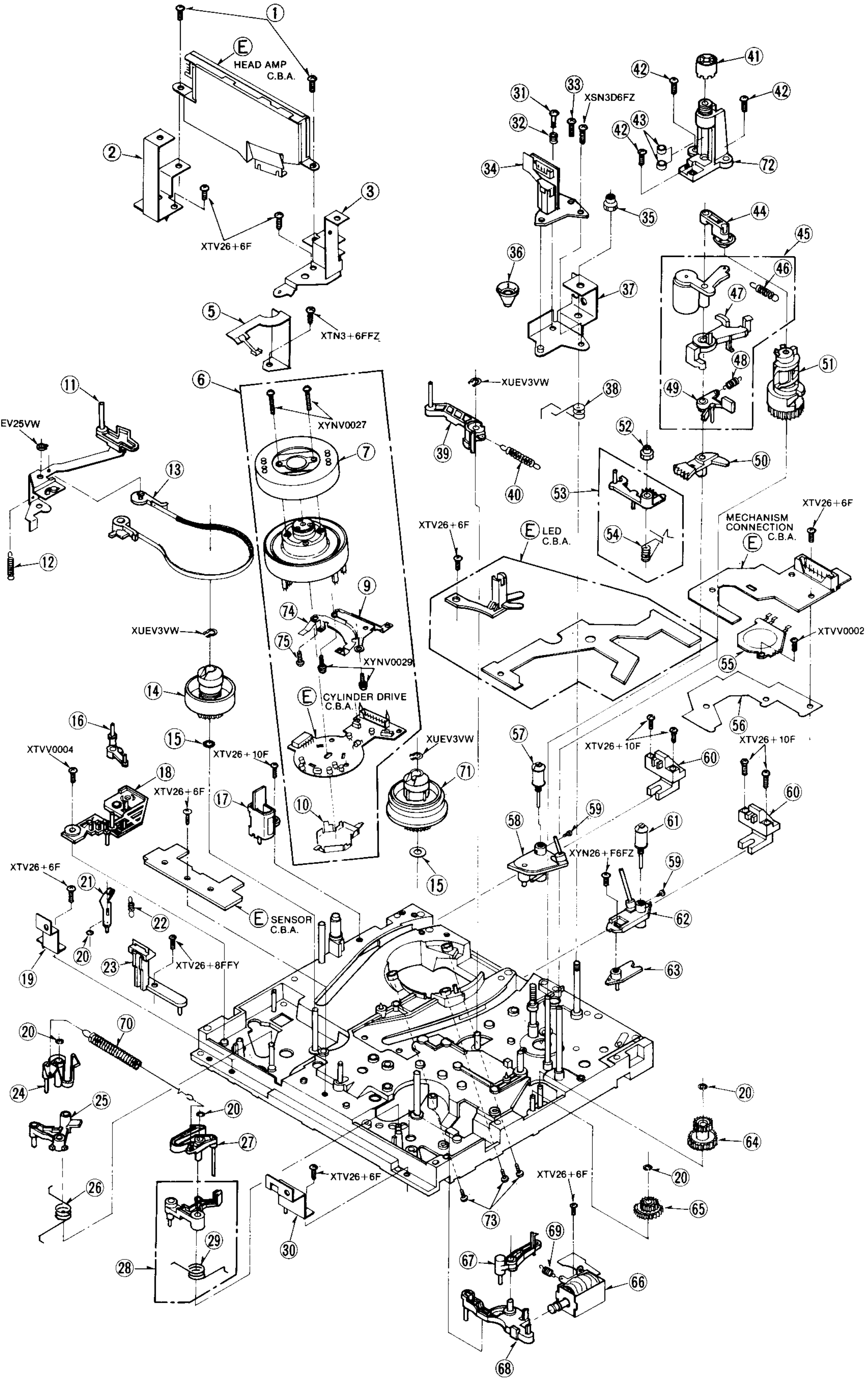


BA7766S

SECTION 4
EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEW ❶ CHASSIS PARTS SECTION (1)


①
Ⓔ HEAD AMP C.B.A.
②
③
XTV26+6F
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XTN3+6FFZ
⑥
XYNV0027
⑦
⑨
⑦④
⑦⑤
XYNV0029
Ⓔ CYLINDER DRIVE C.B.A.
⑩
⑪
XUEV25VW
⑫
⑬
XUEV3VW
⑭
⑮
⑯
XTVV0004
⑰
⑱
XTV26+10F
XTV26+6F
Ⓔ SENSOR C.B.A.
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XTV26+8FFY
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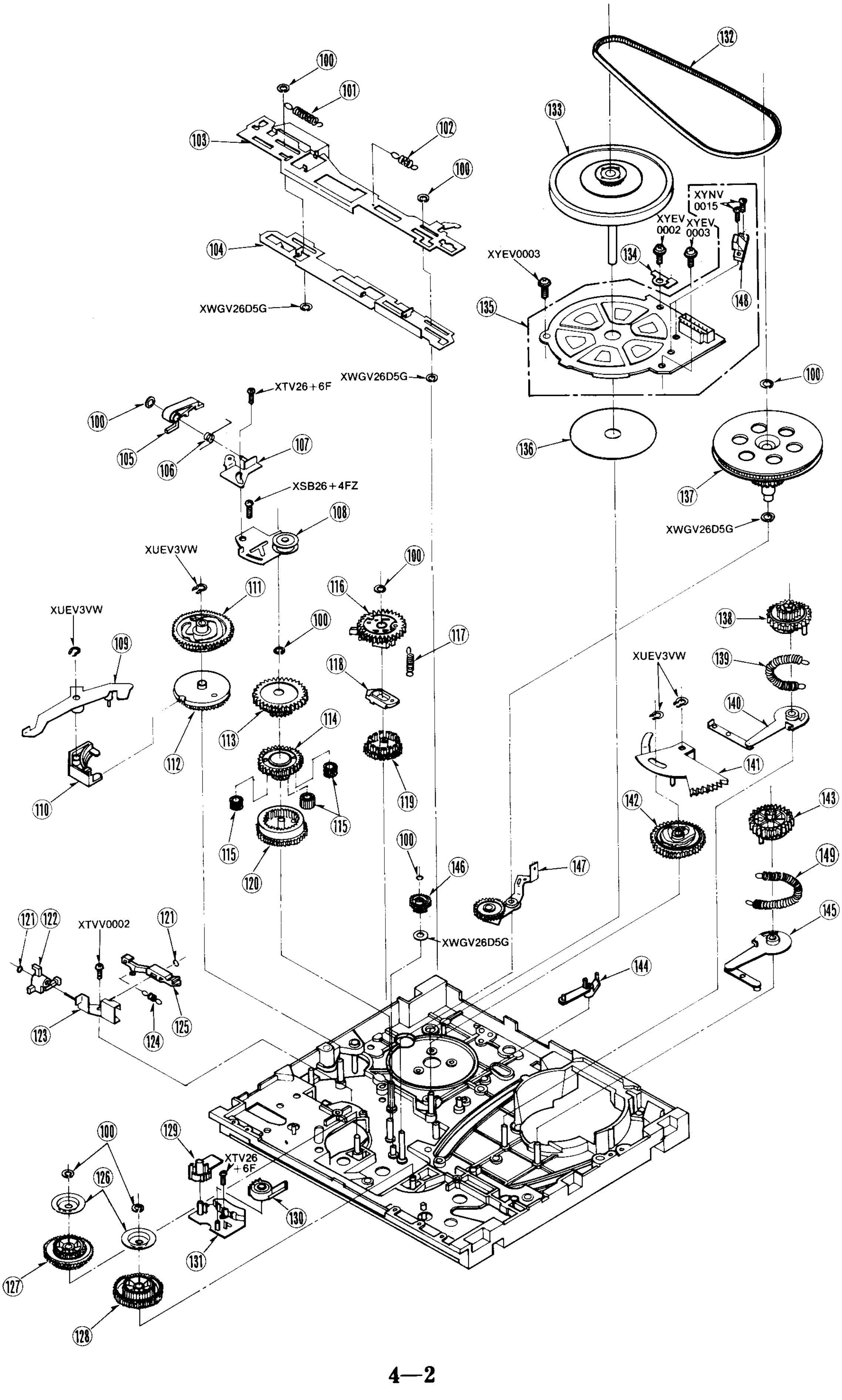
Ⓔ LED C.B.A.
Ⓔ MECHANISM CONNECTION C.B.A.
XTV26+6F
XTVV0002
XTV26+10F
XUEV3VW
XYN26+F6FZ

❷ CHASSIS PARTS SECTION (2)



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XWGV26D5G
XWGV26D5G
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XYNV 0015
XYEV 0002
XYEV 0003
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XYEV0003
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137
XWGV26D5G
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XTV26+6F
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107
XSB26+4FZ
108
XUEV3VW
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XUEV3VW
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XUEV3VW
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XTVV0002
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XWGV26D5G
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XTV26 +6F
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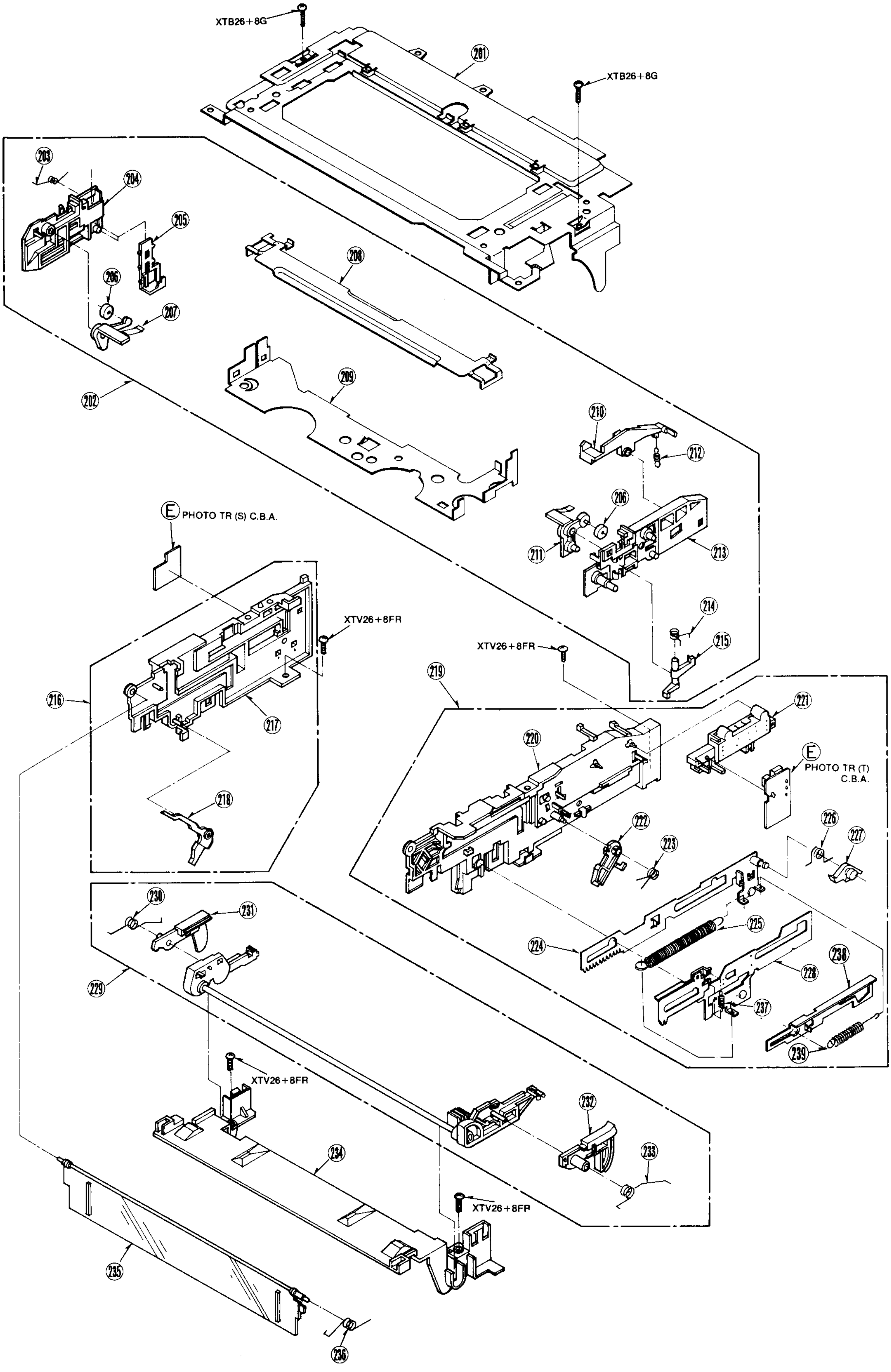
❸ CASSETTE UP MECHANISM SECTION


XTB26+8G
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E PHOTO TR (S) C.B.A.
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XTV26+8FR
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XTV26+8FR
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E PHOTO TR (T) C.B.A.
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XTV26+8FR
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XTV26+8FR
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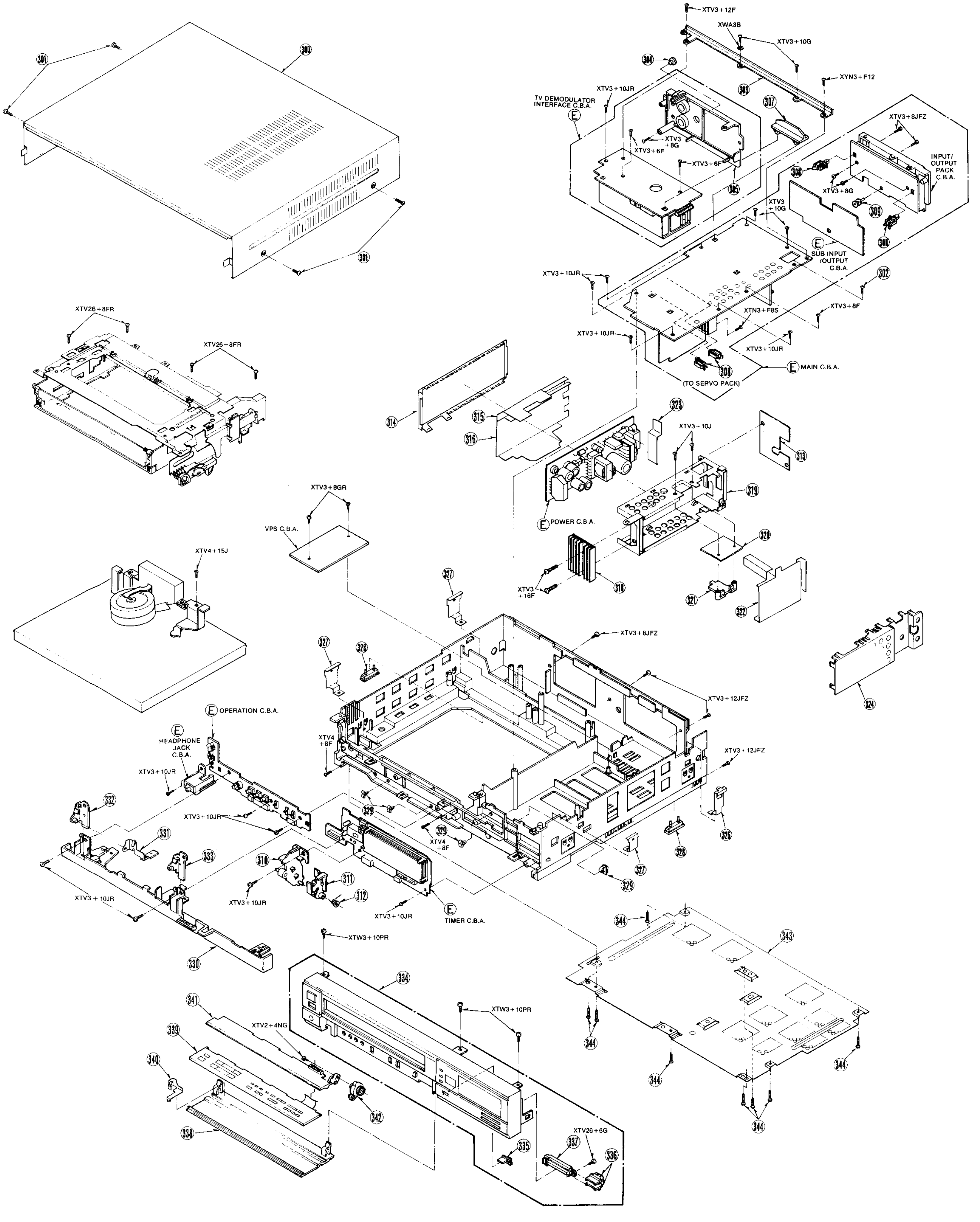
④ CASING PARTS SECTION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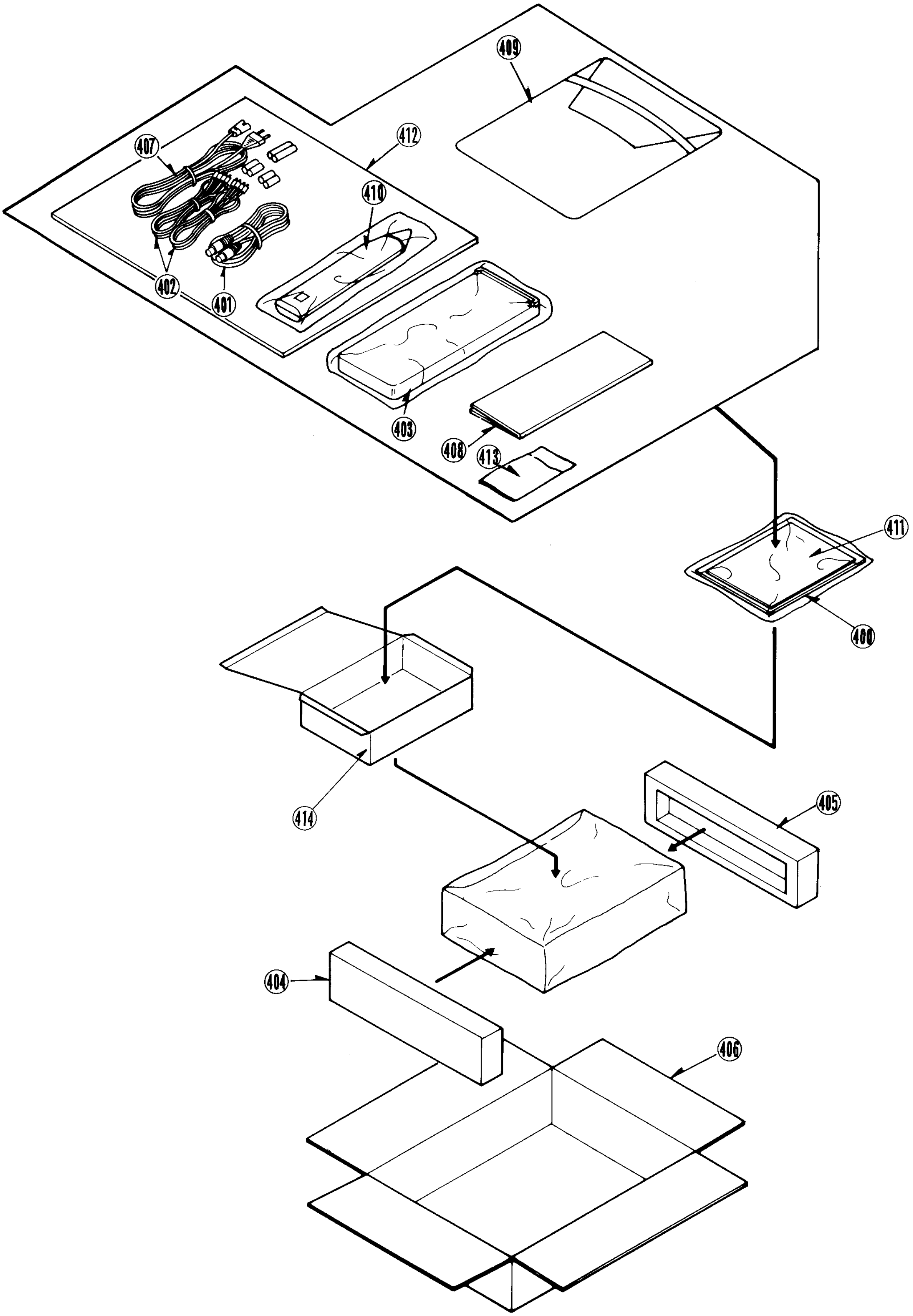
XTV3+12F
XWA3B
XTV3+10G
XYN3+F12
XTV3+10JR
TV DEMODULATOR INTERFACE C.B.A.
E
XTV3+8G
XTV3+6F
XTV3+8JFZ
INPUT/ OUTPUT PACK C.B.A.
SUB INPUT /OUTPUT C.B.A.
XTN3+F8S
XTV3+8F
MAIN C.B.A.
(TO SERVO PACK)
XTV26+8FR
XTV3+10J
POWER C.B.A.
XTV3+8GR
VPS C.B.A.
XTV4+15J
XTV3+16F
XTV3+12JFZ
OPERATION C.B.A.
HEADPHONE JACK C.B.A.
XTV4+8F
TIMER C.B.A.
XTW3+10PR
XTV2+4NG
XTV26+6G

❺ PACKING PARTS SECTION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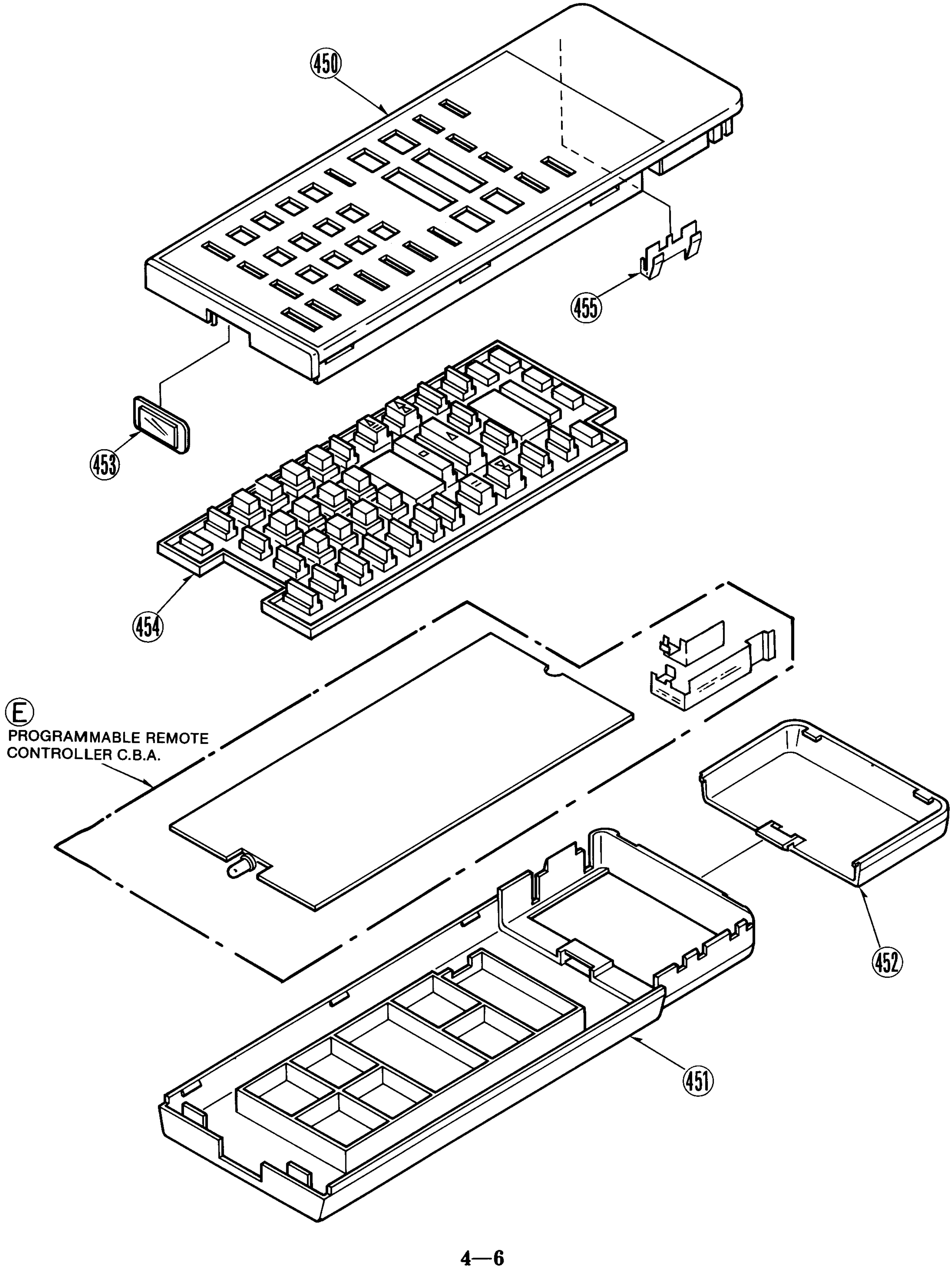
❻ PROGRAMMABLE REMOTE CONTROLLER UNIT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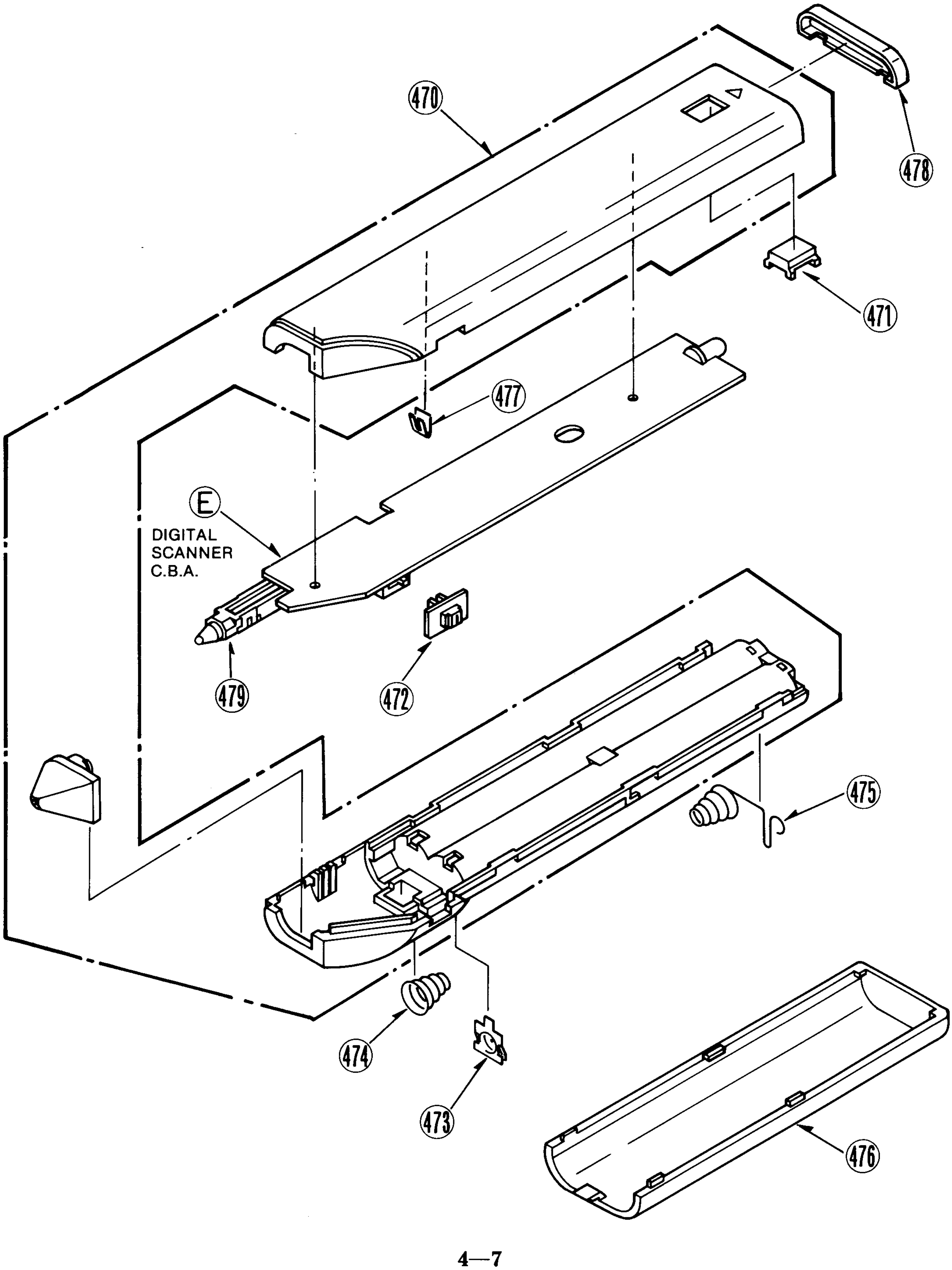
E
PROGRAMMABLE REMOTE
CONTROLLER C.B.A.
452
451

❼ DIGITAL SCANNER


470
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Ⓔ
DIGITAL
SCANNER
C.B.A.
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Memo

ORDER NO. VRD8709M152P
(Date of issue: AUG, 1987)

PARTS LIST

MODEL NO: NV-H75EG

1.NV-H75EG Mechanical Replacement Parts List

※This parts list is detachable from the manual.

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VHD0141	HEAD AMP SET SCREW	2	
2(1)		VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)		VMA6898	HEAD AMP MOUNT ANGLE (R)	1	
5(1)		VXA2702	EARTH PLATE UNIT	1	
6(1)		VEG0559	CYLINDER UNIT	1	<!>
7(1)		VEH0352	UPPER CYLINDER UNIT	1	
9(1)		VMA6884	MAIN HOLDER UNIT	1	
10(1)		VSC2188	CYLINDER C.B.A SHIELD PLATE	1	
11(1)		VXL1495	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0225	TENSION BAND UNIT	1	
14(1)		VXR0145	SUPPLY REEL TABLE UNIT	1	
15(1)		VMX1171	REEL WASHER	2	
16(1)		VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)		VBS0038	FE HEAD	1	
18(1)		VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
20(1)		VMX1079	CUT WASHER	5	
21(1)		VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)		VMB1582	TENSION RELEASE SPRING	1	
23(1)		VES0350	SAFETY SW	1	
24(1)		VXZ0229	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0228	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0231	TAKE UP MAIN BRAKE UNIT	1	
28(1)		VXZ0252	TAKE UP SOFT BRAKE UNIT	1	
29(1)		VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VBR0125	A/C HEAD	1	
35(1)		VHN0063	M4 NYLON NUT	1	
36(1)		VHN0050	ADJUST NUT	1	
37(1)		VXA2675	HEAD BASE UNIT	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1480	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
42(1)		VHD0317	HOUSING SCREW	3	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1078	PINCH CAM CAP	1	
45(1)		VXL1481	PRESSURE ROLLER UNIT	1	
46(1)		VMB1568	PIN PRESSURE SPRING	1	
47(1)		VML1873	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE	1	
			SPRING		
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0357	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
52(1)		VHN0023	M3 NYLON NUT	1	
53(1)		VXL1485	P5 UNIT	1	
54(1)		VMB1554	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
56(1)		VSC1851	SHIELD PLATE	1	
57(1)		VXP0863	ROLLER POST UNIT	1	
58(1)		VXA2729	INCLIND BASE (S)(1)UNIT	1	
59(1)		VHD0133	ROLLER POST SCREW	2	
60(1)		VMD0910	POST STOPPER	2	
61(1)		VXP0764A	ROLLER POST UNIT	1	
62(1)		VXA2686	INCLIND BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)		VDG0334	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0332	CONNECTION GEAR	1	
66(1)		VXA2693	SOLENOID	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VXA2691	SOLENOID LEVER (1) UNIT	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB1565	MAIN BRAKE SPRING	1	
71(1)		VXR0146	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
73(1)		VHD0342	CYLINDER MOUNT SCREW	3	
74(1)		VSC1843	HEAT SINK PLATE	1	
75(1)		VHD0329	HEAT SINK SCREW	1	
100(2)		VMX1079	CUT WASHER	8	
101(2)		VMB1583	TAKE UP SOFT BRAKE RELEASE	1	
			ARM SPRING		
102(2)		VMB1560	MAIN LEVER SPRING	1	
103(2)		VXA2701	MAIN LEVER (1) UNIT	1	
104(2)		VMM0160	SUB LEVER	1	
105(2)		VXL1500	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA2707	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA2674	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0346	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0349	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
121(2)		VMX0967	CUT WASHER	2	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
126(2)		VMX1124	REEL GEAR RING	2	
127(2)		VXP0779	TAKE UP REEL GEAR UNIT	1	
128(2)		VDG0337	SUPPLY REEL GEAR	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0159	TIMING BELT	1	
133(2)		VXP0777	ROTOR UNIT	1	
134(2)		VMA6998	ROTOR STOPPER	1	
135(2)		VEK2944	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP0767	CENTRE PULLEY UNIT	1	
138(2)		VDG0420	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA2929	SECTOR GEAR UNIT	1	
142(2)		VDG0448	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML1855	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0336	INTERMEDIATE GEAR	1	
147(2)		VXL1490	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
201(3)		VMA6903	TOP PLATE	1	
202(3)		VXA2679	CASSETTE HOLDER UNIT	1	
203(3)		VMB1573	MOUNT LEVER SPRING	1	
204(3)		VMD0919	HOLDER GUIDE (L)	1	
205(3)		VMM0163	MOUNT LEVER	1	
206(3)		VDP1077	ROLLER	2	
207(3)		VML1883	PRESSURE LEVER (L)	1	
208(3)		VMA6902	HOLDER ANGLE	1	
209(3)		VMA6901	CASSETTE HOLDER	1	
210(3)		VML1882	OPENER LEVER	1	
211(3)		VML1884	PRESSURE LEVER (R)	1	
212(3)		VMB1584	OPENER LEVER SPRING	1	
213(3)		VMD0920	HOLDER GUIDE (R)	1	
214(3)		VMB1576	RELEASE SPRING	1	
215(3)		VML1881	RELEASE LEVER	1	
216(3)		VXA2676	SIDE PLATE (L) UNIT	1	
217(3)		VMD0917	SIDE PLATE (L)	1	
218(3)		VML1880	OPENER LEVER	1	
219(3)		VXA2677	SIDE PLATE (R) UNIT	1	
220(3)		VMD0918	SIDE PLATE (R)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
221(3)		VSS0176	SLIDE SW	1	
222(3)		VML1886	DOWN SUPPORT LEVER	1	
223(3)		VMB1575	DOWN SUPPORT SPRING	1	
224(3)		VXA2695	RACK (A)(1) UNIT	1	
225(3)		VMB1572	CLUTCH SPRING	1	
226(3)		VMB1574	LOCK SPRING	1	
227(3)		VML1885	LOCK LEVER	1	
228(3)		VXA2829	RACK (B) UNIT	1	
229(3)		VXP0771	MAIN SHAFT UNIT	1	
230(3)		VMB1570	SUB WIPER SPRING (L)	1	
231(3)		VML1878	SUB WIPER ARM	1	
232(3)		VML1879	SUB WIPER ARM (R)	1	
233(3)		VMB1571	SUB WIPER SPRING (R)	1	
234(3)		VMA6900	CASSETTE GUIDE	1	
235(3)		VKF0848	BLINDER PANEL	1	
236(3)		VMB1258	BLINDER SPRING	1	
237(3)		VMB1650	RACK (C) SPRING	1	
238(3)		VMA7062	CONNECTION ROD	1	
239(3)		VMB1686	CONNECTION ROD SPRING	1	
300(4)		VYP1814	TOP PANEL UNIT	1	BLACK
300(4)		VYP1815	TOP PANEL UNIT	1	SILVER
301(4)		VHD0304	TOP PANEL SCREW	4	BLACK
301(4)		VHD0305	TOP PANEL SCREW	4	SILVER
302(4)		VHD0268	C.B. MOUNT SCREW	1	
303(4)		VMP1059	C.B. ANGLE	1	
304(4)		VMG0272	RF CONVERTER BUSHING	1	
305(4)		VJH0417	RF & ANT BOARD	1	
307(4)		VKC0083	HINGE CLIP	1	
308(4)		VJF0236	C.B. SUPPORTER	4	
309(4)		VMX0985	C.B. SPACER	1	
310(4)		VDG0437	DOOR GEAR	1	
311(4)		VML2075	DOOR OPEN LEVER	1	
312(4)		VMB1756	OPEN LEVER SPRING	1	
313(4)		VGH1127	POWER NAME PLATE	1	<!>
314(4)		VSC2178	SHIELD CASE (L)	1	
315(4)		VMZ1083	BARRIER (A)	1	<!>
316(4)		VMZ1084	BARRIER (B)	1	<!>
318(4)		VSC1933	HEAT SINSK	1	
319(4)		VSC1924	SHIELD CASE MAIN	1	
320(4)		VMZ1089	INSULATION SHEET	1	<!>
321(4)		VGQ1352	TRR. HOLDER	1	
322(4)		VMZ1085	BARRIER (C)	1	<!>
323(4)		VMZ1086	BARRIER (D)	1	<!>
324(4)		VSC1829	SHIELD CASE (R)	1	
326(4)		VMP1127	TOP HOLDER ANGLE	1	
327(4)		VMP1037	TOP HOLDER ANGLE (L)	3	
328(4)		VKA0026	RUBBER FOOT	2	
329(4)		VJF0442	WIRE SUDLE	4	
330(4)		VGP1723	SUPPORT PANEL	1	
331(4)		VMC0339	EARTH SPRING (A)	1	
332(4)		VXA3108	SUPPORT PANEL ANGLE (L)	1	
333(4)		VXA3109	SUPPORT PANEL ANGLE (R)	1	
334(4)		VYP2035	FRONT PANEL UNIT	1	BLACK
334(4)		VYP2111	FRONT PANEL UNIT	1	SILVER
335(4)		VGU3979	DOOR OPEN BUTTON	1	BLACK
335(4)		VGU4075	DOOR OPEN BUTTON	1	SILVER
336(4)		VGU3978	REC LEVEL KNOB	2	BLACK
336(4)		VGU4074	REC LEVEL KNOB	2	SILVER
337(4)		VJF0522	REC LEVEL HOLDER	1	BLACK/SILVER
338(4)		VYC0211	DOOR ALUMINUM UNIT	1	BLACK
338(4)		VYC0238	DOOR ALUMINUM UNIT	1	SILVER
339(4)		VES0420	KEY BOARD PANEL UNIT	1	BLACK/SILVER
340(4)		VMC0340	EARTH SPRING (B)	1	
341(4)		VGP1724	DOOR BACK PANEL	1	BLACK/SILVER
342(4)		VDG0436	DAMPER GEAR	1	
343(4)		VKU0246	BOTTOM PLATE	1	
344(4)		VHD0059	BOTTOM SCREW	8	
400(5)		VQT2406	OPERATING INSTRUCTIONS	1	(ENGLISH/GERMAN/
401(5)		VJA0376	DIN RF CABLE	1	FRENCH)<!>
402(5)		VJA0231	AUDIO CABLE	2	
403(5)		VEQ0615	REMOTE CONTROL UNIT	1	
404(5)		VPN1968	CUSHION (L)	1	
405(5)		VPN1969	CUSHION (R)	1	
406(5)		VPG3644	PACKING CASE	1	BLACK
406(5)		VPG3786	PACKING CASE	1	SILVER
407(5)		VJA0443	AC CORD	1	<!>
408(5)		VQC1010	PROGRAMME SHEET	1	
409(5)		VFC0115	DIGITAL SCANNER CASE	1	
410(5)		VEQ0549	DIGITAL SCANNER	1	
411(5)		VQT2237	OPERATING INSTRUCTIONS	1	<!>
			(DIGITAL SCANNER)		
412(5)		VPN1822	ACCESSORIES CUSHION	1	
413(5)		VQF2115	CLEANING BRUSH	1	
414(5)		VPK0688	ACCESSORIES PACKING CASE	1	
450(6)		VYK1756	TOP CASE UNIT	1	
451(6)		VKM1133	BOTTOM CASE	1	
452(6)		VKF0971	BATTERY COVER	1	
453(6)		VKW0878	IR WINDOW	1	
454(6)		VSP0297	RUBBER CONTACT	1	
455(6)		VJR0185	ELECTRODE (COMMON)	1	
470(7)		VYK1628	CASE UNIT	1	
471(7)		VGU3710	TRANSMISSON BUTTON	1	
472(7)		VGU3709	POWER SW KNOB	1	
473(7)		VJR0270	ELECTRODE (A)	1	
474(7)		VJR0271	ELECTRODE (B)	1	
475(7)		VJR0272	ELECTRODE (C)	1	
476(7)		VKF0900	BATTERY COVER	1	
477(7)		VMB1691	SUPPRT ANGLE	1	
478(7)		VKW0772	SMOKE FILTER	1	
479(7)		VSQ0533	SENSOR UNIT	1	
			JIG		
		VFJ8125H3F	VHS-ALIGNMENT TAPE (PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0387	TENSION POST ADJUSTMENT	1	
			PLATE		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0328	H-POSITION ADJ.	1	
			SCREWDRIVER		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK62	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0344	HEIGHT ADJUSTMENT JIG	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0283	SERVICE ALIGNMENT TOOL KIT	1	
		VFK0341	UPPER CYLINDER REMOVER	1	

2.NV-H75EG Electrical Replacement Parts List

Note:1.* Be sure to make your orders of replacement parts according to this list.

2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICROFARADS(uf),P=uuF.

4.The P.C.Board units marked width'█'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03472B	MAIN C.B.A.	1	
			(POWER,SERVO,LUMINANCE &		INCLUDING THE SERVO
			CHROMINANCE,SYSTEM CONTROL,		PACK C.B.A.
			AUDIO)		(VEP02298B) WITH
					SUB SERVO C.B.A.
					(VEP02300A),
					INDEX SEARCH PACK
					C.B.A.(VEP02299B),
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03402F)
					WITH SECAM PACK
					C.B.A.(VEP03452A),
					INPUT/OUTPUT PACK
					C.B.A.(VEP04214A),
					SUB INPUT/OUTPUT
					C.B.A.(VEP04215A),
					HI-FI AUDIO PACK
					C.B.A.(VEP04213B).
		VEP02298B	SERVO PACK C.B.A.	1	
					INCLUDING THE SUB
					SERVO C.B.A.
					(VEP02300A).
		VEP02300A	SUB SERVO C.B.A.	1	
		VEP02299B	INDEX SEARCH PACK C.B.A.	1	
		VEP03402F	LUMINANCE & CHROMINANCE	1	
			PACK C.B.A.		INCLUDING THE SECAM
					PACK C.B.A.
					(VEP03452A).
		VEP03452A	SECAM PACK C.B.A.	1	
		VEP04214A	INPUT/OUTPUT PACK C.B.A.	1	
					INCLUDING THE SUB
					INPUT/OUTPUT C.B.A.
					(VEP04215A).
		VEP04215A	SUB INPUT/OUTPUT C.B.A.	1	
		VEP04213B	HI-FI AUDIO PACK C.B.A.	1	
		VEP05113B	HEAD AMP C.B.A.	1	
		VEP06448A	OPERATION C.B.A.	1	
					INCLUDING THE HEAD
					PHONE JACK C.B.A.
					(VEP00K70A).
		VEP00K70A	HEAD PHONE JACK C.B.A.	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP07420A	TIMER C.B.A.	1	
					INCLUDING THE IR
					RECEIVER C.B.A.
					(VEP06380E).
		VEP06380E	IR RECEIVER C.B.A.	1	
		VEP07421A	VPS C.B.A.	1	
		VEP07429B	TV DEMODULATOR INTERFACE	1	
			C.B.A.		INCLUDING THE TV
					DEMODULATOR C.B.A.
					(VEP07357A),TUNER/
					ARU C.B.A.
					(VEP07358J),MUTING
					C.B.A.(VEP07364A),
					DECODER C.B.A.
					(VEP07359A).
		VEP07357A	TV DEMODULATOR C.B.A.	1	
		VEP07358J	TUNER/ARU C.B.A.	1	
		VEP07364A	MUTING C.B.A.	1	
		VEP07359A	DECODER C.B.A.	1	
		VEP01299A	POWER C.B.A.	1	
		VEP66019D	DIGITAL SCANNER C.B.A.	1	
		VEP66030A	PROGRAMMABLE REMOTE	1	
			CONTROLLER C.B.A.		
		VEP00K62A	CYLINDER DRIVE C.B.A.	1	
		VEP00J52A	MECHANISM CONNECTION C.B.A.	1	
		VEP00H31A	REEL SENSOR C.B.A.	1	
		VXA2689	LED C.B.A. UNIT	1	
		VEP00K27A	PHOTE TR(T) C.B.A.	1	
		VEP00H35A	PHOTE TR(S) C.B.A.	1	
		ENC87956	RF CONVERTER UNIT	1	
		TNV57481F1	TUNER	1	
F1001		XBA2C16TB0	FUSE 250V 1.6A	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03472B	MAIN C.B.A.		
			(POWER, SERVO, LUMINANCE &		
			CHROMINANCE, SYSTEM CONTROL,		
			AUDIO)		
			CAPACITORS		
C202		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C203		ECUM1H562KBN	CHIP 50V 5600P	1	
C204		ECEA1CN100SB	E.CAPACITOR 16V 10U	1	
C205		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C206		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C207		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C208		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C209		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C210		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C212		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C213		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C214		ECUM1H102KBN	CHIP 50V 1000P	1	
C215		ECEA1HKNR33	E.CAPACITOR 50V 0.33U	1	
C216		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C217		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C218		ECUM1H472KBN	CHIP 50V 4700P	1	
C219		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C220		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C221		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C222		ECUM1H562KBN	CHIP 50V 5600P	1	
C223		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C224		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C225		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C226		ECUM1H102KBN	CHIP 50V 1000P	1	
C227		ECUM1H332KBN	CHIP 50V 3300P	1	
C229		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C230		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C231		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C232		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C234		ECUM1H102KBN	CHIP 50V 1000P	1	
C237		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C238		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C239		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C240		ECEA16Z10	E.CAPACITOR 16V 10U	1	
C241		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C242		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C243		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C244		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C245		ECUM1H562KBN	CHIP 50V 5600P	1	
C246		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C247		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C248		ECUM1H102KBN	CHIP 50V 1000P	1	
C254		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C255		ECKF1H332KB	C.CAPACITOR 50V 3300P	1	
C256		VCYD1E103MR	S.CAPACITOR 25V 0.01U	1	
C257		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C258		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C301		ECEA1EKN2R2	E.CAPACITOR 25V 2.2U	1	
C302		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C303		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C304		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C305		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C306		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C307		ECUM1H470JCN	CHIP 50V 47P	1	
C308		ECUM1H220JCN	CHIP 50V 22P	1	
C310		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C311		ECUM1H180JCN	CHIP 50V 18P	1	
C312		ECUM1H180JCN	CHIP 50V 18P	1	
C313		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C314		ECUM1H121JCN	CHIP 50V 120P	1	
C315		ECUM1H560JCN	CHIP 50V 56P	1	
C317		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C319		ECUM1H471KBN	CHIP 50V 470P	1	
C320		ECUM1H270JCN	CHIP 50V 27P	1	
C321		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C322		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C324		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C325		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C326		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C327		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C328		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C329		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C331		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C332		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C333		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C334		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C335		ECUM1H680JCN	CHIP 50V 68P	1	
C336		ECUM1H101JCN	CHIP 50V 100P	1	
C337		ECUM1H270JCN	CHIP 50V 27P	1	
C338		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C339		ECUM1H680JCN	CHIP 50V 68P	1	
C340		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C349		ECUM1H470JCN	CHIP 50V 47P	1	
C351		ECCF1H220JC	C.CAPACITOR 50V 22P	1	
C352		ECQB1H562JZ	M.CAPACITOR 50V 5600P	1	
C353		ECUM1H560JCN	CHIP 50V 56P	1	
C814		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C815		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C816		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C817		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C818		ECUM1H471KBN	CHIP 50V 470P	1	
C819		ECUM1H820JCN	CHIP 50V 82P	1	
C820		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C821		ECEA25Z4R7	E.CAPACITOR 25V 4.7U	1	
C823		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C824		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C825		ECUM1H101JCN	CHIP 50V 100P	1	
C826		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C827		ECUM1H050CCN	CHIP 50V 5P	1	
C828		ECUM1H102KBN	CHIP 50V 1000P	1	
C829		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C851		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C852		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C853		ECEA10Z47	E.CAPACITOR 10V 47U	1	
C854		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C855		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C856		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C858		ECKF1H681KB	C.CAPACITOR 50V 680P	1	
C1101		ECEA0JU470	E.CAPACITOR 6.3V 47U	1	
C1102		ECEA0JU470	E.CAPACITOR 6.3V 47U	1	
C1103		ECEA1EK100	E.CAPACITOR 25V 10U	1	
C1104		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1110		ECEA1CU330	E.CAPACITOR 16V 33U	1	
C2001		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C2002		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C2003		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C2004		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C2005		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C2006		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C2007		VCYD1C223MR1	S.CAPACITOR 16V 0.022U	1	
C2008		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C2011		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2012		ECUM1H332KBN	CHIP 50V 3300P	1	
C2013		ECUM1H332KBN	CHIP 50V 3300P	1	
C2014		ECUM1H332KBN	CHIP 50V 3300P	1	
C2017		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2018		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C2019		ECEA1EU221	E.CAPACITOR 25V 220U	1	
C2020		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2022		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C2801		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C2802		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C2803		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2804		ECUM1H181JCN	CHIP 50V 180P	1	
C2805		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C2806		ECUM1H220JN	CHIP 50V 220P	1	
C2807		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2808		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C2809		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C2810		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2811		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2812		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C2813		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C2814		ECQB1H182KH	P.CAPACITOR 50V 1800P	1	
C2815		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2816		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C3001		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3002		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3004		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3005		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3006		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3007		ECUM1H390JCN	CHIP 50V 39P	1	
C3008		ECUM1H220JCN	CHIP 50V 22P	1	
C3009		ECUM1H681KBN	CHIP 50V 680P	1	
C3010		ECUM1H151JCN	CHIP 50V 150P	1	
C3013		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C3014		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C3015		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3016		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3017		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C3018		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3019		ECUM1H220JCN	CHIP 50V 22P	1	
C3020		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3021		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3022		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3023		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C3024		ECUM1H102KBN	CHIP 50V 1000P	1	
C3050		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C3901		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3902		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3903		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3904		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3905		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3906		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3907		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3908		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3909		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3910		VCYD1E332MR1	S.CAPACITOR 25V 3300P	1	
C3911		VCYD1E332MR1	S.CAPACITOR 25V 3300P	1	
C3912		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3951		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4001		ECQB1H153KH	P.CAPACITOR 50V 0.015U	1	
C4002		ECEA16Z33	E.CAPACITOR 16V 3.3U	1	
C4003		ECUM1H102KBN	CHIP 50V 1000P	1	
C4004		ECQP1332JZ		1	
C4005		ECCD2H121K	C.CAPACITOR 500V 120P	1	
C4006		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4007		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4008		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4009		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4010		ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C4012		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4013		ECUM1H471KBN	CHIP 50V 470P	1	
C4015		ECEA1CKL100	E.CAPACITOR 16V 10U	1	
C4016		ECUM1H102KBN	CHIP 50V 1000P	1	
C4017		ECEA16M10	ELECTROLYTIC 16V 10U	1	
C4018		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4019		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4020		ECUM1H102KBN	CHIP 50V 1000P	1	
C4021		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C4022		ECUM1H102KBN	CHIP 50V 1000P	1	
C4023		ECUM1H221JN	CHIP 50V 220P	1	
C4024		ECUM1H101JCN	CHIP 50V 100P	1	
C4025		ECUM1H101JCN	CHIP 50V 100P	1	
C4026		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C4027		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4028		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4029		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4030		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4032		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C4033		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4034		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4036		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C4037		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4038		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4100		ECEA1CPK101	E.CAPACITOR 16V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4101		ECEA1APK101	E.CAPACITOR 10V 100U	1	
C4103		ECEA1HPK010	E.CAPACITOR 50V 10U	1	
C4104		ECEA1APK101	E.CAPACITOR 10V 100U	1	
C4106		ECEA1APK470	E.CAPACITOR 10V 47U	1	
C4107		ECEA1HPK010	E.CAPACITOR 50V 10U	1	
C4501		VCEA1VAC3R3J	E.CAPACITOR 35V 3.3U	1	
C4502		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4503		ECUM1H102KBN	CHIP 50V 1000P	1	
C4504		ECQB1H222JH	P.CAPACITOR 50V 2200P	1	
C4505		ECUM1H102KBN	CHIP 50V 1000P	1	
C4506		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4507		ECEA1EPK4R7	E.CAPACITOR 25V 4.7U	1	
C4508		ECEA1CPK330	E.CAPACITOR 16V 33U	1	
C4509		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4510		ECUM1H100DCN	CHIP 50V 10P	1	
C4511		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4512		ECUM1H222JM	CHIP 50V 2200P	1	
C4513		ECEA1EPB4R7	E.CAPACITOR 25V 4.7U	1	
C4514		VCEA1CA330	E.CAPACITOR 16V 33U	1	
C4515		ECEA25Z4R7	E.CAPACITOR 25V 4.7U	1	
C4516		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4517		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4518		ECUM1H471KBN	CHIP 50V 470P	1	
C4519		ECEA1HPK2R2	E.CAPACITOR 50V 2.2U	1	
C4520		ECUM1H331KBN	CHIP 50V 330P	1	
C4521		ECEA1EPK4R7	E.CAPACITOR 25V 4.7U	1	
C4522		ECEA1CPK220	E.CAPACITOR 16V 22U	1	
C4523		ECCF1H101JL	C.CAPACITOR 50V 100P	1	
C4524		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4525		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4528		ECUM1H471JCN	CHIP 50V 470P	1	
C4532		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4533		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4534		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4535		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4536		ECCF1H391JC	C.CAPACITOR 50V 390P	1	
C4537		ECCF1H271J	C.CAPACITOR 50V 270P	1	
C4551		VCEA1VAC3R3J	E.CAPACITOR 35V 3.3U	1	
C4552		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4553		ECUM1H102KBN	CHIP 50V 1000P	1	
C4554		ECQB1H222JH	P.CAPACITOR 50V 2200P	1	
C4555		ECUM1H102KBN	CHIP 50V 1000P	1	
C4556		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4557		ECEA1EPK4R7	E.CAPACITOR 25V 4.7U	1	
C4558		ECEA1CPK330	E.CAPACITOR 16V 33U	1	
C4559		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4560		ECUM1H100DCN	CHIP 50V 10P	1	
C4561		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4562		ECUM1H222JM	CHIP 50V 2200P	1	
C4563		ECEA1EPB4R7	E.CAPACITOR 25V 4.7U	1	
C4564		VCEA1CA330	E.CAPACITOR 16V 33U	1	
C4565		ECEA25Z4R7	E.CAPACITOR 25V 4.7U	1	
C4566		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4567		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4568		ECUM1H471KBN	CHIP 50V 470P	1	
C4569		ECEA1HPK2R2	E.CAPACITOR 50V 2.2U	1	
C4570		ECUM1H331KBN	CHIP 50V 330P	1	
C4571		ECEA1EPK4R7	E.CAPACITOR 25V 4.7U	1	
C4572		ECEA1CPK220	E.CAPACITOR 16V 22U	1	
C4573		ECCF1H101JL	C.CAPACITOR 50V 100P	1	
C4574		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4575		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4578		ECUM1H471JCN	CHIP 50V 470P	1	
C4582		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4583		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4584		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4585		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4586		ECCF1H391JC	C.CAPACITOR 50V 390P	1	
C4587		ECCF1H271J	C.CAPACITOR 50V 270P	1	
C4601		VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4602		VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4603		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4604		ECEA1APK470J	E.CAPACITOR 10V 47U	1	
C4605		ECEA1APK470J	E.CAPACITOR 10V 47U	1	
C4606		ECEA1AK470	E.CAPACITOR 10V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4607		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4609		ECEA1HKR33	E.CAPACITOR 50V 0.33U	1	
C4610		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4611		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4612		ECQB1H333JH	P.CAPACITOR 50V 0.033U	1	
C4613		VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4614		ECEA1HKR33	E.CAPACITOR 50V 0.33U	1	
C4615		VCEA1CAC470J	E.CAPACITOR 10V 47U	1	
C4616		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4617		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4618		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4619		ECEA1626R8	E.CAPACITOR 16V 6.8U	1	
C4620		ECUM1H391JN	CHIP 50V 390P	1	
C4621		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4629		ECUM1H221JN	CHIP 50V 200P	1	
C4630		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C4631		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4632		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C4633		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C4634		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C4635		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4638		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4639		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4640		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4641		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4642		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4643		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4644		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C4645		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4650		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C4901		VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4902		VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4903		ECKF1H101KB	C.CAPACITOR 50V 100P	1	
C4904		ECKF1H101KB	C.CAPACITOR 50V 100P	1	
C4907		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4908		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4909		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C4910		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C4911		ECKF1H101KB	C.CAPACITOR 50V 100P	1	
C4912		ECKF1H101KB	C.CAPACITOR 50V 100P	1	
C4913		ECQB1H682JH	P.CAPACITOR 50V 6800P	1	
C4914		ECQB1H682JH	P.CAPACITOR 50V 6800P	1	
C4915		ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C4916		ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C4919		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C4920		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4921		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4922		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4923		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4924		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4925		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4926		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C4927		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C4951		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C4952		VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4953		VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4954		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C4955		VCEA1CAC100J	E.CAPACITOR 16V 10U	1	
C4957		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4959		VCEA1AAC470J	E.CAPACITOR 10V 47U	1	
C4960		VCEA1CAC100J	E.CAPACITOR 16V 10U	1	
C4961		VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4965		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C4966		ECCF1H120JC	C.CAPACITOR 50V 12P	1	
C4967		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4968		ECQB1H222KH	P.CAPACITOR 50V 2200P	1	
C4969		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4970		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C4971		VCEA1CAC220J	S.CAPACITOR 16V 220P	1	
C4972		VCEA1CAC220J	S.CAPACITOR 16V 220P	1	
C6001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6002		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C6003		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C6006		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6007		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6011		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C6012		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C6013		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6017		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6018		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6019		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6020		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C6023		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C6024		ECUM1H271KBN	CHIP 50V 270P	1	
C6025		ECUM1H271KBN	CHIP 50V 270P	1	
C6026		ECUM1H271KBN	CHIP 50V 270P	1	
C6027		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C7553		ECEA1HK100	E.CAPACITOR 50V 10U	1	
C7555		ECQB1H273KH	P.CAPACITOR 50V 0.027U	1	
C7556		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7557		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7558		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7559		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7560		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7561		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7563		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7564		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7565		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7566		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7567		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7569		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7571		VCE0025		1	
C7572		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
			DIODES		
D201		MA153	DIODE	1	
D203		MA165	DIODE	1	OR 1SS119, 1SS254
D204		MA153	DIODE	1	
D301		MA4091	DIODE	1	
D1101		MA165	DIODE	1	
D1102		MA165	DIODE	1	
D2007		MA165	DIODE	1	
D2801		MA165	DIODE	1	
D2802		MA165	DIODE	1	
D2803		MA165	DIODE	1	
D2804		MA165	DIODE	1	
D2805		MA165	DIODE	1	
D3001		MA165	DIODE	1	
D3003		MA165	DIODE	1	
D3901		MA165	DIODE	1	
D3951		MA165	DIODE	1	
D4001		MA165	DIODE	1	
D4002		MA165	DIODE	1	
D4003		MA700	DIODE	1	
D4004		MA700	DIODE	1	
D4050		MA165	DIODE	1	
D4501		MA151WA	DIODE	1	
D4503		MA151WA	DIODE	1	
D4514		MA165	DIODE	1	
D4516		MA165	DIODE	1	
D4517		MA151WK	DIODE	1	
D4518		MA165	DIODE	1	
D4956		MA165	DIODE	1	
D4957		MA165	DIODE	1	
D6001		ERA15-01	DIODE	1	
D6002		MA165	DIODE	1	
D6004		MA165	DIODE	1	
D6005		MA165	DIODE	1	
D6009		MA165	DIODE	1	
D6010		MA165	DIODE	1	
D6011		MA165	DIODE	1	
D6012		MA165	DIODE	1	
D6017		MA165	DIODE	1	
D6019		MA4150M	DIODE	1	
D6020		MA4110M	DIODE	1	
D6021		AK04V2	DIODE	1	
D6022		MA165	DIODE	1	
D6023		MA165	DIODE	1	
D6024		MA165	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D6028		MA165	DIODE	1	
D6029		MA165	DIODE	1	
D6030		MA4056L	DIODE	1	
D7550		MA165	DIODE	1	
D7558		MA165	DIODE	1	
D7559		MA165	DIODE	1	
			DELAY LINE		
DL802		EFDHR124A13S	DELAY LINE	1	
			FILTERS		
FL301		ELB4M022	FILTER	1	
FL302		VLF0499	FILTER	1	
FL303		VLF0567	FILTER	1	
FL801		VLF0299	FILTER	1	
FL851		VLF0143	FILTER	1	
FL3901		ELB4H020	FILTER	1	
FL4501		VLF0406	FILTER	1	
FL4502		VLF0406	FILTER	1	
FL4503		VLF0442	FILTER	1	
FL4504		VLF0594	FILTER	1	
FL4505		VLF0441	FILTER	1	
			ICS		
IC201		UPD6160CA606	IC	1	
IC202		MN15312VYM	IC	1	
IC203		UPC358C	IC	1	
IC204		UPD4069UBC	IC	1	
IC301		VEFH03A	HIC	1	
IC303		MSM6965-3RS	IC	1	
IC801		VEFH04A	HIC	1	
IC851		BA7025L	IC	1	
IC2001		BA6430S	IC	1	
IC2801		BA6305	IC	1	
IC2802		UPD4013BC	IC	1	
IC2803		UPC393C	IC	1	
IC2804		UPC358C	IC	1	
IC3901		TA7348P	IC	1	
IC3902		BA7004	IC	1	
IC3951		UPD4001BC	IC	1	
IC4001		BA7766S	IC	1	
IC4101		NJM4560DD	IC	1	
IC4501		UPC2306GH	IC	1	
IC4502		UPC2305GH	IC	1	
IC4503		TC9205F	IC	1	
IC4901		AN6558	IC	1	
IC4951		UPD4052BC	IC	1	
IC4952		NJM4560DD	IC	1	
IC4953		M5201L	IC	1	
IC6001		MN15362VBX	IC	1	
IC6002		UPC393C	IC	1	
IC6003		UPD4510BC	IC	1	
IC6004		MN1280R	IC	1	
IC7551		AN5043	IC	1	
IC7552		AN6913	IC	1	
IC7553		UPD4066BC	IC	1	
			COILS		
L301		VLQEL05F101K	COIL 100UH	1	
L302		VLQEL05F220K	COIL 22UH	1	
L303		VLQEL05F101K	COIL 100UH	1	
L304		VLQEL05F101K	COIL 100UH	1	
L306		VLQEL05F101K	COIL 100UH	1	
L307		VLQEL05F151K	COIL 150UH	1	
L308		VLQEL05F270K	COIL 27UH	1	
L309		VLQEL05F101K	COIL 100UH	1	
L310		VLQEL05F101K	COIL 100UH	1	
L311		VLQEL05F2R2K	COIL 2.2UH	1	
L804		VLQEL05F150K	COIL 15UH	1	
L805		VLQEL05F101K	COIL 100UH	1	
L806		VLQEL05F681K	COIL 680UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L808		VLQEL05F470K	COIL 47UH	1	
L809		VLQEL05F331K	COIL 330UH	1	
L810		VLQEL05F101K	COIL 100UH	1	
L811		VLQEL05F470K	COIL 47UH	1	
L812		VLQEL05F681K	COIL 680UH	1	
L851		VLQEL05F101K	COIL 100UH	1	
L2001		VLQEL05F102K	COIL 1000UH	1	
L3001		VLQEL05F101K	COIL 100UH	1	
L3002		VLQEL05F101K	COIL 100UH	1	
L3003		VLQEL05F120K	COIL 12UH	1	
L3004		VLQEL05F101K	COIL 100UH	1	
L3005		VLQEL05F6R8K	COIL 6.8UH	1	
L3006		VLQEL05F3R3K	COIL 3.3UH	1	
L3901		VLQEL05F101K	COIL 100UH	1	
L3902		VLQEL05F101K	COIL 100UH	1	
L4001		VLQEL07F822J	COIL 8200UH	1	
L4002		VLQEL05F471K	COIL 470UH	1	
L4501		VLQEL05F101K	COIL 100UH	1	
L4502		VLQEL05F101K	COIL 100UH	1	
L4503		VLQEL05F4R7K	COIL 4.7UH	1	
L4504		VLQEL05F101K	COIL 100UH	1	
L4901		VLQEL05F102K	COIL 1000UH	1	
L4902		VLQEL05F102K	COIL 1000UH	1	
L4903		VLQEL05F102K	COIL 1000UH	1	
L4904		VLQEL05F102K	COIL 1000UH	1	
L4905		VLQEL05F101K	COIL 100UH	1	
L4906		VLQEL05F101K	COIL 100UH	1	
			CONNECTORS		
P201		VJS1904	CONNECTOR (FEMALE)	1	
P501		VJS1741T	CONNECTOR (FEMALE)	1	
P502		VJS1236T	CONNECTOR (FEMALE)	1	
P1504		VJS1745T	CONNECTOR (FEMALE)	1	
P2002		VJP1932T	CONNECTOR (MALE)	1	
P2901		VJS1738T	CONNECTOR (FEMALE)	1	
P4001		VJP1233T	CONNECTOR(MALE) 6P	1	
P4002		VJP1230T	CONNECTOR(MALE) 3P	1	
P6002		VJS2175	CONNECTOR (FEMALE)	1	
P6003		VJP1239T	CONNECTOR(MALE) 12P	1	
P6004		VJS2230	CONNECTOR (FEMALE)	1	
P7302		VJS1867	CONNECTOR (FEMALE)	1	
P7801		VJS1234T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q201		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q202		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q203		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q204		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q205		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q206		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q208		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q301		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q302		2SC2295	TRANSISTOR CHIP	1	(B,C)
Q303		2SC2295	TRANSISTOR CHIP	1	(B,C)
Q304		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q804		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q1101		2SC1384	TRANSISTOR	1	(S)
Q2001		2SB641	TRANSISTOR	1	(Q,R)
Q2002		2SD636	TRANSISTOR	1	(Q,R)
Q2801		2SD636	TRANSISTOR	1	
Q2802		2SB641	TRANSISTOR	1	(Q,R,S)
Q2803		2SD636	TRANSISTOR	1	
Q2804		2SD636	TRANSISTOR	1	
Q2805		2SD636	TRANSISTOR	1	
Q2806		2SD636	TRANSISTOR	1	
Q2807		2SD636	TRANSISTOR	1	
Q2808		2SD636	TRANSISTOR	1	
Q3001		2SB641	TRANSISTOR	1	(Q,R)
Q3003		2SD636	TRANSISTOR	1	(Q,R)
Q3004		2SC2206	TRANSISTOR	1	(B,C)
Q3005		2SD636	TRANSISTOR	1	(Q,R)
Q3050		2SD636	TRANSISTOR	1	(Q,R)
Q3901		2SC2206	TRANSISTOR	1	(B,C)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q3951		2SB641	TRANSISTOR	1	(Q,R,S)
Q4001		2SD638	TRANSISTOR	1	(R)
Q4003		2SD636	TRANSISTOR	1	(Q,R)
Q4004		2SD636	TRANSISTOR	1	(Q,R)
Q4005		2SD636	TRANSISTOR	1	(Q,R)
Q4501		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q4502		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q4505		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q4506		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q4507		2SC2295	TRANSISTOR CHIP	1	(B,C)
Q4508		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q4901		2SD636	TRANSISTOR	1	(Q,R,S,T)
Q4951		2SD636	TRANSISTOR	1	(Q,R,S)
Q6007		2SB790	TRANSISTOR	1	(R,S)
Q6009		2SB790	TRANSISTOR	1	(R,S)
Q6016		2SD1275P	TRANSISTOR	1	
Q6017		2SD893	TRANSISTOR	1	(Q,R)
Q6018		2SD973	TRANSISTOR	1	(Q,R,S)
Q6019		2SD638	TRANSISTOR	1	(Q,R)
Q7553		2SD636	TRANSISTOR	1	
			COMBINATION PARTS		
QR201		DTA144EK	TRANSISTOR-RESISTOR	1	
QR202		DTA144EK	TRANSISTOR-RESISTOR	1	
QR203		UN2212	TRANSISTOR-RESISTOR	1	
QR852		UN1213	TRANSISTOR-RESISTOR	1	
QR853		UN1213	TRANSISTOR-RESISTOR	1	
QR1101		UN1211	TRANSISTOR-RESISTOR	1	
QR1102		UN1211	TRANSISTOR-RESISTOR	1	
QR2002		UN1212	TRANSISTOR-RESISTOR	1	
QR2007		UN1213	TRANSISTOR-RESISTOR	1	
QR2801		UN1213	TRANSISTOR-RESISTOR	1	
QR2802		UN1213	TRANSISTOR-RESISTOR	1	
QR2803		UN1213	TRANSISTOR-RESISTOR	1	
QR2804		UN1211	TRANSISTOR-RESISTOR	1	
QR3001		UN1111	TRANSISTOR-RESISTOR	1	
QR3002		UN1212	TRANSISTOR-RESISTOR	1	
QR3003		UN1113	TRANSISTOR-RESISTOR	1	
QR3004		UN1214	TRANSISTOR-RESISTOR	1	
QR4001		UN1113	TRANSISTOR-RESISTOR	1	
QR4002		UN1213	TRANSISTOR-RESISTOR	1	
QR4003		UN1112	TRANSISTOR-RESISTOR	1	
QR4004		UN1112	TRANSISTOR-RESISTOR	1	
QR4006		UN1112	TRANSISTOR-RESISTOR	1	
QR4007		UN1211	TRANSISTOR-RESISTOR	1	
QR4501		UN221E	TRANSISTOR-RESISTOR	1	
QR4503		UN2213	TRANSISTOR-RESISTOR	1	
QR4504		UN2213	TRANSISTOR-RESISTOR	1	
QR4505		UN2112	TRANSISTOR-RESISTOR	1	
QR4506		UN2213	TRANSISTOR-RESISTOR	1	
QR4507		UN2213	TRANSISTOR-RESISTOR	1	
QR4508		UN2213	TRANSISTOR-RESISTOR	1	
QR6001		UN1212	TRANSISTOR-RESISTOR	1	
QR6003		UN1213	TRANSISTOR-RESISTOR	1	
QR6004		UN1213	TRANSISTOR-RESISTOR	1	
QR6005		UN1213	TRANSISTOR-RESISTOR	1	
QR6006		UN1111	TRANSISTOR-RESISTOR	1	
QR6008		UN1111	TRANSISTOR-RESISTOR	1	
QR6009		UN1210	TRANSISTOR-RESISTOR	1	
QR6011		UN1212	TRANSISTOR-RESISTOR	1	
QR6012		UN1113	TRANSISTOR-RESISTOR	1	
QR6013		UN1213	TRANSISTOR-RESISTOR	1	
QR7510		UN2113	TRANSISTOR-RESISTOR	1	
QR7556		UN1213	TRANSISTOR-RESISTOR	1	
QR7557		UN1213	TRANSISTOR-RESISTOR	1	
QR7559		UN1213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R201		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R202		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R203		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R204		ERJ6GMYJ221	CHIP 1/16W 220	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R205		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R206		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R207		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R208		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R209		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R210		ERJ6GMYJ274	CHIP 1/16W 270K	1	
R211		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R212		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R213		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R214		ERJ6GMYJ224	CHIP 1/16W 220K	1	
R215		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R216		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R217		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R218		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R219		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R220		ERJ6GMYJ274	CHIP 1/16W 270K	1	
R222		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R223		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R224		ERJ6GMYJ561	CHIP 1/16W 560	1	
R225		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R226		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R227		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R228		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R229		ERJ6GMYJ221	CHIP 1/16W 220	1	
R230		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R231		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R232		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R233		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R234		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R235		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R236		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R237		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R238		ERJ6GMYJ124	CHIP 1/16W 120K	1	
R239		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R240		ERJ6GMYG333	CHIP 1/16W 33K	1	
R241		ERJ6GMYJ684	CHIP 1/16W 680K	1	
R242		ERJ6GMYJ184	CHIP 1/16W 180K	1	
R243		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R244		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R245		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R246		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R247		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R248		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R249		ERJ6GMYG472	CHIP 1/16W 4.2K	1	
R250		ERJ6GMYJ821	CHIP 1/16W 820	1	
R251		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R252		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R253		ERJ6GMYJ684	CHIP 1/16W 680K	1	
R256		ERJ6GMYJ123	CHIP 1/16W 12K	1	
R257		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R258		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R259		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R260		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R261		ERJ6GMYJ183	CHIP 1/16W 18K	1	
R266		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R267		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R268		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R269		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R274		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R275		ERDS2TJ334	C.RESISTOR 1/4W 330K	1	
R301		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R302		ERJ6GMYJ391	CHIP 1/16W 390	1	
R303		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R304		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R305		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R306		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R307		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R308		ERJ6GMYJ123	CHIP 1/16W 12K	1	
R309		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R310		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R311		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R312		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R316		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R317		ERJ6GMYJ471	CHIP 1/16W 470	1	
R325		ERJ6GMYJ151	CHIP 1/16W 150	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R326		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R327		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R328		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R329		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R330		ERJ6GMYJ183	CHIP 1/16W 18K	1	
R331		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R332		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R334		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R335		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R338		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R339		ERJ6GMYJ101	CHIP 1/16W 100	1	
R814		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R815		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R816		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R818		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R819		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R820		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R821		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R822		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R823		ERJ6GMYJ271	CHIP 1/16W 270	1	
R824		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R825		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R851		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R852		ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R853		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R854		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R855		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R856		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R858		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1101		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R1102		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2001		ERDS2TJ560	C.RESISTOR 1/4W 56	1	
R2002		ERDS2TJ560	C.RESISTOR 1/4W 56	1	
R2003		ERDS2TJ560	C.RESISTOR 1/4W 56	1	
R2004		ERX12SJ1R0	M.RESISTOR 1/2W 1	1	
R2005		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R2006		ERJ6GMYG512	CHIP 1/16W 5.1K	1	
R2007		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R2008		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R2009		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R2010		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R2018		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2029		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R2030		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R2031		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R2032		ERJ6GMYJ124	CHIP 1/16W 120K	1	
R2033		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R2034		ERJ6GMYJ391	CHIP 1/16W 390	1	
R2037		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2800		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R2801		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2802		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2803		ERJ6GMYJ561	CHIP 1/16W 560	1	
R2804		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R2805		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R2806		ERJ6GMYJ221	CHIP 1/16W 220	1	
R2807		ERJ6GMYJ823	CHIP 1/16W 82K	1	
R2808		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2809		ERJ6GMYJ750	CHIP 1/16W 75	1	
R2810		ERJ6GMYJ124	CHIP 1/16W 120K	1	
R2811		EROS2CKG1102	M.RESISTOR 1/4W 11K	1	
R2812		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R2813		ERJ6GMYJ221	CHIP 1/16W 220	1	
R2814		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R2815		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R2816		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R2817		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R2818		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R2819		ERGS2CKG1203	M.RESISTOR 1/4W 120K	1	
R2820		ERJ6GMYJ221	CHIP 1/16W 220	1	
R2821		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2822		ERJ6GMYJ124	CHIP 1/16W 120K	1	
R2823		ERJ6GMYJ273	CHIP 1/16W 27K	1	
R2824		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R2825		ERJ6GMYJ102	CHIP 1/16W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2826		ERJ6GMYJ154	CHIP 1/16W 150K	1	
R2827		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R2828		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R2829		ERJ6GMYJ681	CHIP 1/16W 680	1	
R2830		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R2831		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R2832		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R2833		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R2834		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R2835		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R2836		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R2837		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R2838		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R2839		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R2840		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R3001		ERJ6GMYJ471	CHIP 1/16W 470	1	
R3004		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R3006		ERJ6GMYJ821	CHIP 1/16W 820	1	
R3008		ERJ6GMYJ821	CHIP 1/16W 820	1	
R3010		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R3013		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R3016		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R3018		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R3050		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R3052		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R3060		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R3061		ERJ6GMYJ561	CHIP 1/16W 560	1	
R3062		ERJ6GMYJ471	CHIP 1/16W 470	1	
R3063		ERJ6GMYJ101	CHIP 1/16W 100	1	
R3901		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R3902		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3903		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3904		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R3905		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R3906		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3907		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R3909		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3910		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3911		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R3912		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R3913		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3914		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R3915		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R3951		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3952		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3953		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R3954		ERDS2TJ684	C.RESISTOR 1/4W 680K	1	
R3955		ERDS2TJ684	C.RESISTOR 1/4W 680K	1	
R4001		ERJ6GMYJ183	CHIP 1/16W 18K	1	
R4002		ERJ6GMYJ100	CHIP 1/16W 10	1	
R4003		ERJ6GMYJ183	CHIP 1/16W 18K	1	
R4004		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R4005		ERJ6GMYJ181	CHIP 1/16W 180	1	
R4007		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R4008		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R4009		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4010		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R4012		ERJ6GMYJ331	CHIP 1/16W 330	1	
R4013		ERJ6GMYJ334	CHIP 1/16W 330K	1	
R4014		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4016		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R4017		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R4018		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R4019		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R4020		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R4021		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R4022		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4023		ERJ6GMYG473	CHIP 1/16W 47K	1	
R4024		ERJ6GMYG104	CHIP 1/16W 100K	1	
R4025		ERJ6GMYG104	CHIP 1/16W 100K	1	
R4026		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R4027		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R4034		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R4036		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R4051		ERJ6GMYJ123	CHIP 1/16W 12K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4052		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R4053		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R4100		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R4101		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4104		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4105		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R4106		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R4107		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4108		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R4111		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4112		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R4113		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R4501		ERJ6GMYG562	CHIP 1/16W 5.6K	1	
R4502		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4503		ERJ6GMYG103	CHIP 1/16W 10K	1	
R4504		ERJ6GMYG122	CHIP 1/16W 1.2K	1	
R4505		ERJ6GMYG622	CHIP 1/16W 6.2K	1	
R4506		ERJ6GMYG681	CHIP 1/16W 680	1	
R4507		ERJ6GMYG242	CHIP 1/16W 2.4K	1	
R4508		ERJ6GMYG303	CHIP 1/16W 30K	1	
R4509		ERJ6GMYG562	CHIP 1/16W 5.6K	1	
R4510		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4511		ERJ6GMYG183	CHIP 1/16W 18K	1	
R4512		ERJ6GMYG912	CHIP 1/16W 9.1K	1	
R4513		ERJ6GMYG163	CHIP 1/16W 16K	1	
R4514		ERJ6GMYG103	CHIP 1/16W 10K	1	
R4515		ERJ6GMYG112	CHIP 1/16W 1.1K	1	
R4516		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R4517		EROS2CKG3001	M.RESISTOR 1/4W 3K	1	
R4518		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R4519		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R4520		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R4521		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R4551		ERJ6GMYG562	CHIP 1/16W 5.6K	1	
R4552		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4553		ERJ6GMYG103	CHIP 1/16W 10K	1	
R4554		ERJ6GMYG122	CHIP 1/16W 1.2K	1	
R4555		ERJ6GMYG622	CHIP 1/16W 6.2K	1	
R4556		ERJ6GMYG681	CHIP 1/16W 680	1	
R4557		ERJ6GMYG242	CHIP 1/16W 2.4K	1	
R4558		ERJ6GMYG303	CHIP 1/16W 30K	1	
R4559		ERJ6GMYG562	CHIP 1/16W 5.6K	1	
R4560		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4561		ERJ6GMYG183	CHIP 1/16W 18K	1	
R4562		ERJ6GMYG912	CHIP 1/16W 9.1K	1	
R4563		ERJ6GMYG163	CHIP 1/16W 16K	1	
R4564		ERJ6GMYG103	CHIP 1/16W 10K	1	
R4565		ERJ6GMYG112	CHIP 1/16W 1.1K	1	
R4566		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	
R4567		EROS2CKG2201	M.RESISTOR 1/4W 2.2K	1	
R4569		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R4570		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R4571		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R4601		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R4602		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R4607		ERJ6GMYG123	CHIP 1/16W 1.2K	1	
R4608		ERJ6GMYG303	CHIP 1/16W 30K	1	
R4609		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R4612		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R4613		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R4614		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R4615		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4616		ERJ6GMYJ184	CHIP 1/16W 180K	1	
R4617		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R4618		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R4619		ERJ6GMYJ271	CHIP 1/16W 270	1	
R4620		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R4621		ERJ6GMYJ221	CHIP 1/16W 220	1	
R4622		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4623		ERJ6GMYJ184	CHIP 1/16W 180K	1	
R4624		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R4625		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R4626		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R4627		ERJ6GMYJ271	CHIP 1/16W 270	1	
R4628		ERJ6GMYJ822	CHIP 1/16W 8.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4629		ERJ6GMYJ273	CHIP 1/16W 27K	1	
R4632		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R4633		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R4634		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R4635		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R4636		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R4637		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R4638		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R4639		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R4640		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R4641		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R4642		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R4643		ERJ6GMYJ183	CHIP 1/16W 18K	1	
R4644		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R4645		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R4646		ERJ6GMYJ334	CHIP 1/16W 330K	1	
R4648		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R4680		ERJ6GMYJ184	CHIP 1/16W 180K	1	
R4901		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R4902		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4903		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4908		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R4909		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R4910		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4911		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R4912		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R4913		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R4916		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R4917		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R4919		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R4920		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R4922		EROS2CKG2201	M.RESISTOR 1/4W 2.2K	1	
R4923		EROS2CKG2201	M.RESISTOR 1/4W 2.2K	1	
R4924		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4925		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4926		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4927		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4928		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4929		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4930		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4931		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4932		ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R4933		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4952		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4953		EROS2CKG2202	M.RESISTOR 1/4W 22K	1	
R4954		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R4955		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R4956		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R4957		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R4960		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4961		EROS2CKG2202	M.RESISTOR 1/4W 22K	1	
R4962		EROS2CKG2202	M.RESISTOR 1/4W 22K	1	
R4963		ERDS2TJ153	C.RESISTOR 1/4W 15K	1	
R4965		EROS2CKG2202	M.RESISTOR 1/4W 22K	1	
R4967		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4968		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4969		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4970		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4971		ERDS2TJ684	C.RESISTOR 1/4W 680K	1	
R4972		ERDS2TJ684	C.RESISTOR 1/4W 680K	1	
R4973		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R4975		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4978		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4985		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4986		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R4987		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4988		ERDS2TJ274	C.RESISTOR 1/4W 270K	1	
R4989		ERDS2TJ124	C.RESISTOR 1/4W 120K	1	
R4990		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4991		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4992		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4993		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R4994		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R4995		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R4996		EROS2CKG1001	M.RESISTOR 1/4W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4997		EROS2CKG3901	M.RESISTOR 1/4W 3.9K	1	
R4998		EROS2CKG1001	M.RESISTOR 1/4W 1K	1	
R4999		EROS2CKG3901	M.RESISTOR 1/4W 3.9K	1	
R6001		ERDS1TJ470	C.RESISTOR 1/2W 47	1	
R6002		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R6005		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6006		ERD2FCVG220	C.RESISTOR 2W 22	1	
R6007		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R6008		ERJ6GMYJ181	CHIP 1/16W 180	1	
R6009		ERJ6GMYJ561	CHIP 1/16W 560	1	
R6010		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R6011		ERJ6GMYJ221	CHIP 1/16W 220	1	
R6014		ERJ6GMYJ392	CHIP 1/16W 3.9K	1	
R6016		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6017		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6019		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R6022		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6023		ERJ6GMYJ683	CHIP 1/16W 68K	1	
R6024		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6025		ERJ6GMYJ824	CHIP 1/16W 820K	1	
R6026		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R6027		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R6028		ERJ6GMYJ184	CHIP 1/16W 180K	1	
R6029		ERJ6GMYJ561	CHIP 1/16W 560	1	
R6030		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R6031		ERJ6GMYJ153	CHIP 1/16W 15K	1	
R6032		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6033		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R6034		ERJ6GMYJ333	CHIP 1/16W 33K	1	
R6035		ERJ6GMYJ101	CHIP 1/16W 100	1	
R6036		ERJ6GMYJ101	CHIP 1/16W 100	1	
R6037		ERJ6GMYJ101	CHIP 1/16W 100	1	
R6038		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R6041		ERJ6GMYJ391	CHIP 1/16W 390	1	
R6042		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6045		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6046		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R6050		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6051		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R6067		ERJ6GMYJ101	CHIP 1/16W 100	1	
R6068		ERDS1SVJ332		1	
R6069		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6070		ERJ6GMYJ471	CHIP 1/16W 470	1	
R6071		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R6072		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R6073		ERJ6GMYJ271	CHIP 1/16W 270	1	
R6074		ERJ6GMYJ121	CHIP 1/16W 120	1	
R6075		ERG2SJ180	M.RESISTOR 2W 18	1	
R6076		ERJ6GMYJ181	CHIP 1/16W 180	1	
R6079		ERJ6GMYJ472	CHIP 1/16W 4.7K	1	
R6080		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R6081		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6083		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R6084		ERJ6GMYJ561	CHIP 1/16W 560	1	
R6085		ERJ6GMYJ561	CHIP 1/16W 560	1	
R6087		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R6088		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R6089		ERJ6GMYJ272	CHIP 1/16W 2.7K	1	
R6090		ERJ6GMYJ821	CHIP 1/16W 820	1	
R6091		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R6093		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R7551		ERX1SJ152E		1	
R7555		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7557		ERJ6GMYJ124	CHIP 1/16W 120K	1	
R7558		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R7559		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7560		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7561		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R7565		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7568		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7576		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7577		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7578		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7579		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7580		ERJ6GMYJ103	CHIP 1/16W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7581		ERJ6GMYJ562	CHIP 1/16W 5.6K	1	
R7582		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R7583		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7584		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R7585		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7586		ERJ6GMYJ563	CHIP 1/16W 56K	1	
R7589		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R7590		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R7595		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
			SWITCHS		
S3901		VSS0186	SWITCH	1	
S3903		VSS0196	SWITCH	1	
			TRANSFORMERS		
T851		ELM7Q207A	TRANSFORMER	1	
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR302		EVN3ACA00B14	V.RESISTOR 10K	1	
VR803		EVND1AA00B14	V.RESISTOR 10K	1	
VR2001		EVND3AA00B54	V.RESISTOR 50K	1	
VR2002		EVND3AA00B15	V.RESISTOR 100K	1	
VR2010		EVL51MA00B25	V.RESISTOR 200K	1	
VR2011		EVND3AA00B15	V.RESISTOR 100K	1	
VR2013		EVN38CA00B23	V.RESISTOR 2K	1	
VR3012		EVND3AA00B52	V.RESISTOR 500	1	
VR4001		EVND3AA00B14	V.RESISTOR 10K	1	
VR4002		EVND3AA00B25	V.RESISTOR 200K	1	
VR4004		EVND3AA00B53	V.RESISTOR 5K	1	
VR4005		EVND3AA00B53	V.RESISTOR 5K	1	
VR4501		EVN3ACA00B13	V.RESISTOR 1K	1	
VR4502		EVND3AA00B14	V.RESISTOR 10K	1	
VR4503		EVND3AA00B23	V.RESISTOR 2K	1	
VR4504		EVND1AA00B24	V.RESISTOR 20K	1	
VR4505		EVND1AA00B14	V.RESISTOR 10K	1	
VR4507		EVND3AA00B14	V.RESISTOR 10K	1	
VR4508		EVND1AA00B24	V.RESISTOR 20K	1	
VR4509		EVN3ACA00B13	V.RESISTOR 1K	1	
VR4510		EVN38CA00B15	V.RESISTOR 100K	1	
VR4512		EVND1AA00B13	V.RESISTOR 1K	1	
			CRYSTAL OSCILLATORS		
X301		VSX0225	CRYSTAL OSCILLATOR	1	
X801		VSX0162A	CRYSTAL OSCILLATOR	1	
X3901		VSX0099	CRYSTAL OSCILLATOR	1	
X6001		VSX0204	CRYSTAL OSCILLATOR	1	
X7504		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISELLANEOUS		
		VMC0075	HEAT SINK FIX SPRING	1	
		VSC1689	HEAT SINK	1	
		VSC1068	HEAT SINK	1	
		VWJ0265	FLEXIBLE CABLE 5P	1	
		VJF0045	WIRE SADLE	1	
		VMZ0960	HEAT SINK BARRIER	1	
		VJF0236	C.B. SUPPORT	4	
		VEJ0600	REAR JACK	1	
		VGU2707	TEST ON/OFF KNOB	1	
		VMX0985	SPACER	1	
		VMX0550	RUBBER SPACER	3	
	■	VEP05113B	HEAD AMP C.B.A.		
			CAPACITORS		
C501		ECUM1H103ZFN	CHIP 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C502		ECUM1H820JCN	CHIP 50V 82P	1	
C503		ECUM1H181JC	CHIP 50V 180P	1	
C504		ECUM1H470JCN	CHIP 50V 47P	1	
C505		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C506		ECUM1E473ZFN	CHIP 25V 0.047U	1	
C507		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C508		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C509		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C510		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C511		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C513		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C514		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C515		ECUM1H102KBN	CHIP 50V 1000P	1	
C516		ECUM1H150JCN	CHIP 50V 15P	1	
C517		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C519		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C520		ECUM1H150JCN	CHIP 50V 15P	1	
C521		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C522		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C523		ECUM1H150JCN	CHIP 50V 15P	1	
C524		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C526		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C527		ECUM1H102KBN	CHIP 50V 1000P	1	
C528		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C529		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C530		ECUM1E473ZFN	CHIP 25V 0.047U	1	
C531		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C533		ECUM1H560JCN	CHIP 50V 56P	1	
C534		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C537		ECUM1H150JCN	CHIP 50V 15P	1	
C538		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C539		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C551		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C552		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C553		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C554		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C555		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C556		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C557		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C558		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C559		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C560		ECUM1H122KBN	CHIP 50V 1200P	1	
C561		ECUM1H122KBN	CHIP 50V 1200P	1	
C562		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C563		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C564		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C565		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C566		ECUM1H101JCN	CHIP 50V 100P	1	
C567		ECUM1H101JCN	CHIP 50V 100P	1	
			ICS		
IC501		AN3224K	IC	1	
IC502		AN3311S	IC	1	
IC551		UPC2304CA	IC	1	
			COILS		
L501		VLQEL05F101K	COIL 100UH	1	
L502		VLQEL05F680K	COIL 68UH	1	
L503		VLQEL05F151K	COIL 150UH	1	
L505		VLQEL05F101K	COIL 100UH	1	
L507		VLQEL05R270J	COIL 27UH	1	
L551		VLQEL05F101K	COIL 100UH	1	
L552		VLQEL05F101K	COIL 100UH	1	
L580		VLQ0127	COIL	1	
L581		VLQ0127	COIL	1	
			CONNECTORS		
P002		VJS1927	CONNECTOR (FEMALE)	1	
P501		VJP1248T	CONNECTOR(MALE) 8P	1	
P502		VJP1236T	CONNECTOR(MALE) 9P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			TRANSISTOR		
Q501		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
			RESISTORS		
R501		ERJ6GMYJ561	CHIP 1/16W 560	1	
R502		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R503		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
R504		ERJ6GMYJ331	CHIP 1/16W 330	1	
R505		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R506		ERJ6GMYJ471	CHIP 1/16W 470	1	
R508		ERJ6GMYJ100	CHIP 1/16W 10	1	
R509		ERJ6GMYJ100	CHIP 1/16W 10	1	
R510		ERJ6GMYJ561	CHIP 1/16W 560	1	
R511		ERJ6GMYJ821	CHIP 1/16W 820	1	
R512		ERJ6GMYJ821	CHIP 1/16W 820	1	
R515		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R516		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
R517		ERJ6GMYJ391	CHIP 1/16W 390	1	
R522		ERJ6GMYJ561	CHIP 1/16W 560	1	
R523		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R524		ERJ6GMYJ334	CHIP 1/16W 330K	1	
R525		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R526		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R551		ERJ6GMYJ681	CHIP 1/16W 680	1	
R552		ERJ6GMYJ221	CHIP 1/16W 220	1	
R553		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R554		ERJ6GMYJ393	CHIP 1/16W 39K	1	
R555		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R556		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R559		ERJ6GMYJ100	CHIP 1/16W 10	1	
R560		ERJ6GMYJ100	CHIP 1/16W 10	1	
R580		ERJ6GMYJ471	CHIP 1/16W 470	1	
R581		ERJ6GMYJ471	CHIP 1/16W 470	1	
			VARIABLE RESISTORS		
VR501		EVND1AA00B23	V.RESISTOR 2K	1	
VR502		EVND1AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC2204	SHIELD CASE (TOP)	1	
		VSC2205	SHIELD CASE (BOTTOM)	1	
		VSC1834	SHIELD CASE (MAIN)	1	
	■	VEP06448A	OPERATION C.B.A.		
			CAPACITORS		
C6301		ECQB1H103KH	P.CAPACITOR 50V 0.01U	1	
C6302		ECQB1H103KH	P.CAPACITOR 50V 0.01U	1	
C6501		ECQB1H223KH	P.CAPACITOR 50V 0.022U	1	
C6502		ECQB1H223KH	P.CAPACITOR 50V 0.022U	1	
			DIODES		
D6501		LN28RCPP	LED	1	
D6502		LN38GCPPSVT	LED	1	
D6503		MA165	DIODE	1	
D6508		MA165	DIODE	1	
D6510		MA165	DIODE	1	
D6511		MA165	DIODE	1	
D6512		MA165	DIODE	1	
D6513		MA165	DIODE	1	
			JACK		
J6301		VJJ0148	HEAD PHONE JACK	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COILS		
L6301		VLQEL05F471K	COIL 470UH	1	
L6302		VLQEL05F471K	COIL 470UH	1	
L6501		VLQEL05F121K	COIL 120UH	1	
L6502		VLQEL05F121K	COIL 120UH	1	
			CONNECTORS		
P6501		VJP1249T	CONNECTOR(MALE) 9P	1	
P6502		VJP1252T	CONNECTOR(MALE) 12P	1	
P6505		VJP1230T	CONNECTOR(MALE) 3P	1	
			COMBINATION PARTS		
QR6510		UN1213	TRANSISTOR-RESISTOR	1	
QR6511		UN1113	TRANSISTOR-RESISTOR	1	
QR6512		UN1213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6501		ERJ6GMYJ271	CHIP 1/16W 270	1	
R6503		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R6510		ERJ6GMYJ222	CHIP 1/16W 2.2K	1	
			SWITCHS		
SW6501		EVQQS307K	SWITCH	1	
SW6509		EVQQS307K	SWITCH	1	
SW6510		ESD14314	SWITCH	1	
SW6512		VSS0162	SWITCH	1	
SW6513		VSS0186	SWITCH	1	
			VARIABLE RESISTORS		
VR6501		EVUFSAE04B15	V.RESISTOR 100K	1	
VR6502		EVUFSAE04B15	V.RESISTOR 100K	1	
VR6503		EVUJ16E04B24	V.RESISTOR 20K	1	
VR6504		EVJVGAE05C23	V.RESISTOR 2K	1	
			MISCELLANEOUS		
		VGU3364	AUDIO SLIDE KNOB	1	
		VGU3435	SW KNOB	2	
		VMD1047	LED HOLDER	2	
		VJF0521	JACK HOLDER	1	
	■	VEP07420A	TIMER C.B.A.		
			CAPACITORS		
C6701		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6702		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C6703		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6704		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C7501		ECRHA030E41	TRIMER 30P	1	
C7502		ECUM1H080DCN	CHIP 50V 8P	1	
C7503		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C7504		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C7505		ECUM1H220JCN	CHIP 50V 22P	1	
C7506		ECUM1H330JCN	CHIP 50V 33P	1	
C7507		ECEA1HK100	E.CAPACITOR 50V 10U	1	
C7508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7509		ECUM1H331KBN	CHIP 50V 330P	1	
C7510		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C7511		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7512		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7514		ECUM1E104ZFN	CHIP 25V 0.1U	1	
C7515		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C7517		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7519		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C7520		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C7521		ECUM1H102KBN	CHIP 50V 1000P	1	
			DIODES		
D6701		PN323B	PHOTO DIODE	1	
D7501		11ES1	DIODE	1	
D7502		MA73	DIODE	1	
D7503		MA4068	DIODE	1	
D7504		MA73	DIODE	1	
D7505		MA73	DIODE	1	
D7506		MA73	DIODE	1	
D7507		MA73	DIODE	1	
D7508		MA73	DIODE	1	
D7509		MA73	DIODE	1	
D7510		MA73	DIODE	1	
D7511		MA73	DIODE	1	
D7512		MA73	DIODE	1	
D7513		MA73	DIODE	1	
D7514		MA73	DIODE	1	
D7517		LN81RCPHL	LED	1	
D7518		LN81RCPHL	LED	1	
D7519		LN81RCPHL	LED	1	
D7521		MA73	DIODE	1	
D7522		MA73	DIODE	1	
D7526		MA73	DIODE	1	
D7527		MA73	DIODE	1	
D7534		MA73	DIODE	1	
D7538		MA73	DIODE	1	
			DISPLAY TUBE		
DP7501		VSL0109	DISPLAY TUBE	1	
			IC		
IC6701		UPC1490HA	IC	1	
IC7501		MN15283VYH	IC	1	
IC7502		MN1220	IC	1	
IC7503		MN1280P	IC	1	
IC7504		BA6800AS	IC	1	
IC7505		MN1280	IC	1	
			COIL		
L7501		VLQEL05F221K	COIL 220UH	1	
			CONNECTORS		
P7501		VJS1632	CONNECTOR(FEMALE)	1	
P7502		VJS1837	CONNECTOR (FEMALE)	1	
P7503		VJS1729	CONNECTOR(FEMALE)	1	
P7504		VJS1937	CONNECTOR (FEMALE)	1	
P7505		VJP1249T	CONNECTOR(MALE) 9P	1	
P7507		VJP1246T	CONNECTOR(MALE) 6P	1	
P7508		VJP1244T	CONNECTOR(MALE) 4P	1	
			TRANSIATOR		
Q7501		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
			COMBINATION PARTS		
QR7501		UN2112	TRANSISTOR-RESISTOR	1	
QR7502		UN2213	TRANSISTOR-RESISTOR	1	
QR7503		UN2213	TRANSISTOR-RESISTOR	1	
QR7507		UN2112	TRANSISTOR-RESISTOR	1	
QR7508		UN2112	TRANSISTOR-RESISTOR	1	
QR7509		UN2213	TRANSISTOR-RESISTOR	1	
QR7510		UN2213	TRANSISTOR-RESISTOR	1	
QR7511		UN2213	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R6701		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R6702		ERDS2TJ8R2	C.RESISTOR 1/4W 8.2	1	
R7501		ERJ6GMYJ122	CHIP 1/16W 1.2K	1	
R7502		ERJ6GMYJ224	CHIP 1/16W 220K	1	
R7503		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7504		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7505		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7506		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7507		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7508		ERJ6GMYJ103	CHIP 1/16W 10K	1	
R7509		ERJ6GMYJ223	CHIP 1/16W 22K	1	
R7510		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7511		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R7512		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R7513		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R7514		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R7515		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7516		ERJ6GMYJ182	CHIP 1/16W 1.8K	1	
R7517		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R7519		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R7520		ERJ6GMYG363	CHIP 1/16W 36K	1	
R7521		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7522		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7524		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7525		ERJ6GMYG332	CHIP 1/16W 3.3K	1	
R7526		ERJ6GMYG302	CHIP 1/16W 3K	1	
R7527		ERJ6GMYG302	CHIP 1/16W 3K	1	
R7528		ERJ6GMYG332	CHIP 1/16W 3.3K	1	
R7530		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R7531		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R7532		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7536		ERJ6GMYJ684	CHIP 1/16W 680K	1	
R7537		ERJ6GMYJ684	CHIP 1/16W 680K	1	
R7538		ERJ6GMYJ221	CHIP 1/16W 220	1	
R7540		ERJ6GMYJ473	CHIP 1/16W 47K	1	
R7541		ERJ6GMYJ331	CHIP 1/16W 330	1	
R7542		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7543		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R7547		ERJ6GMYJ821	CHIP 1/16W 820	1	
R7548		ERJ6GMYJ152	CHIP 1/16W 1.5K	1	
RX7501		EXBF12E104J		1	
RX7502		EXBF11E104J		1	
			VARIABLE RESISTORS		
VR6701		EVMLGGA00B15	V.RESISTOR 100K	1	
VR7501		EWANYEX05J54	V.RESISTOR 50K	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0140	CRYSTAL OSCILLATOR	1	
X7502		VSX0094A	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		KL04	LED SPACER	3	
		VJF0508	FIP HOLDER	1	
	■	VEP07421A	VPS C.B.A.		
			CAPACITORS		
C7801		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C7802		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C7803		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7804		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C7805		ECCF1H150JC	C.CAPACITOR 50V 15P	1	
C7806		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C7807		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C7808		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C7809		ECKF1H271KB	C.CAPACITOR 50V 270P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7810		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C7811		ECCF1H180JC	C.CAPACITOR 50V 18P	1	
C7812		ECCF1H820JC	C.CAPACITOR 50V 82P	1	
C7814		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C7815		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C7816		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C7818		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7819		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C7820		ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C7821		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C7851		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7852		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C7853		ECCF1H330JC	C.CAPACITOR 50V 33P	1	
C7854		ECCF1H330JC	C.CAPACITOR 50V 33P	1	
C7855		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7856		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7860		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
			DIODE		
D7851		MA165	DIODE	1	
			ICS		
IC7801		SAA5235	IC	1	
IC7802		SAF1135P	IC	1	
IC7851		MN158412VYR	IC	1	
IC7852		MN1280 T	IC	1	
			COILS		
L7801		VLQ0193	COIL	1	
L7802		VLQEL05F101K	COIL 100UH	1	
L7803		VLQEL05F101K	COIL 100UH	1	
			CONNECTORS		
P7801		VJP1234T	CONNECTOR(MALE) 7P	1	
P7802		VJP1231T	CONNECTOR(MALE) 4P	1	
			TRANSISTORS		
Q7801		2SD636	TRANSISTOR	1	(Q,R,S)
Q7802		2SB641	TRANSISTOR	1	(Q,R,S)
Q7803		2SB641	TRANSISTOR	1	(Q,R,S)
			COMBINATION PARTS		
QR7851		UN1211	TRANSISTOR-RESISTOR	1	
QR7852		UN1213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R7803		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7804		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7809		ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R7810		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R7811		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7812		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R7813		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7814		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7815		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7816		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R7817		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7818		ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R7851		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7860		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
			CRYSTAL OSCILLATOR		
X7801		VSX0173	CRYSTAL OSCILLATOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			FILTER		
X7851		EFOA4ROM03C2	FILTER	1	
	■	VEP07429B	TV DEMODULATOR INTERFACE		
			C.B.A.		
			CONNECTORS		
BP7001		VJP1254	CONNECTOR (MALE)	1	
BP7002		VJP1254	CONNECTOR (MALE)	1	
			CAPACITORS		
C702		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C704		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C705		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C707		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C708		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C709		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C710		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C715		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C716		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C717		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C718		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C720		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C721		ECEA1HKR27	E.CAPACITOR 50V 0.27U	1	
C722		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C723		ECUM1H120JCN	CHIP 50V 12P	1	
C727		ECUM1H080DCN	CHIP 50V 8OP	1	
C728		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C730		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C731		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C733		ECUM1H680JCN	CHIP 50V 68P	1	
C734		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C739		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C740		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C741		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C742		ECUM1H030CCN	CHIP 50V 3P	1	
C743		ECUM1H270RSN	CHIP 50V 27P	1	
C744		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C745		ECUM1H680JPN	CHIP 50V 68P	1	
C746		ECUM1H150UCN	CHIP 50V 15P	1	
C747		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C748		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C750		ECQB1H183JH	P.CAPACITOR 50V 0.018U	1	
C752		ECUM1H102KBN	CHIP 50V 1000P	1	
C753		ECQB1H103KH	P.CAPACITOR 50V 0.01U	1	
C754		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C755		ECUM1H390JPN	CHIP 50V 39P	1	
C756		ECUM1H120JCN	CHIP 50V 12P	1	
C758		ECQB1H103KH	P.CAPACITOR 50V 0.01U	1	
C759		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C760		ECUM1H390JPN	CHIP 50V 39P	1	
C761		ECUM1H120JCN	CHIP 50V 12P	1	
C762		ECQB1H393JH	P.CAPACITOR 50V 0.039U	1	
C763		ECUM1H102KBN	CHIP 50V 1000P	1	
C764		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C765		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C766		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C768		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C775		ECUM1H120JCN	CHIP 50V 12P	1	
C781		ECUM1H102KBN	CHIP 50V 1000P	1	
C782		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C783		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7302		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7303		ECQB1H393JH	P.CAPACITOR 50V 0.039U	1	
C7304		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7305		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7306		ECQB1H102KH	P.CAPACITOR 50V 1000P	1	
C7307		ECQB1H822KH	P.CAPACITOR 50V 8200P	1	
C7308		ECQB1H102KH	P.CAPACITOR 50V 1000P	1	
C7309		ECQB1H152JH	P.CAPACITOR 50V 1500P	1	
C7310		ECEA16Z10	E.CAPACITOR 16V 10U	1	
C7311		ECEA50ZR47	E.CAPACITOR 50V 0.47U	1	
C7312		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7313		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7314		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7315		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7316		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C7317		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C7318		ECUM1H103ZFN	CHIP 50V 0.01U	1	
C7319		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C7320		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7321		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7323		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C7324		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C7331		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C7651		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7652		ECEA1CKN330	E.CAPACITOR 16V 33U	1	
C7653		ECQB1H392JH	P.CAPACITOR 50V 3900P	1	
C7654		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C7655		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7656		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7657		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C7658		ECQP1562JZ	P.CAPACITOR 100V 5600P	1	
C7659		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
			DIODES		
D710		MA3100L	DIODE	1	
D712		MA28WA	DIODE	1	
D771		MA151WK	DIODE	1	
D7301		MA151A	DIODE	1	
D7302		MA151A	DIODE	1	
			ICS		
IC701		M51366SP	IC	1	
IC751		AN5215	IC	1	
IC752		AN5215	IC	1	
IC7301		TDA3803A	IC	1	
IC7651		AN5421	IC	1	
			COILS		
L701		VLQEL05F680K	COIL 68UH	1	
L702		VLQEL05F680K	COIL 68UH	1	
L703		VLQEL05F221K	COIL 220UH	1	
L704		VLQEL05F221K	COIL 220UH	1	
L712		ELQTR82XB	COIL	1	
L714		ELQT1R2KB	COIL	1	
L715		VLQEL05F680K	COIL 68UH	1	
L716		VLQEL05F560K	COIL 56UH	1	
L717		VLQEL05F680K	COIL 68UH	1	
L718		VLQEL05F680K	COIL 68UH	1	
L719		VLQEL05F120K	COIL 12UH	1	
L7301		VLQEL05F102K	COIL 1000UH	1	
L7304		VTQ0014	COIL	1	
			CONNECTORS		
P701		VJS2230	CONNECTOR (FEMALE)	1	
P702		VJP2145	CONNECTOR (MALE)	1	
P703		VJP1233T	CONNECTOR(MALE) 6P	1	
			TRANSISTORS		
Q703		2SD601	TRANSISTOR CHIP	1	(S)
Q710		2SC2377	TRANSISTOR	1	(C,D
Q711		2SC2404	TRANSISTOR CHIP	1	(C,D
Q712		2SD638	TRANSISTOR	1	
Q713		2SD1328	TRANSISTOR CHIP	1	(S,

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q714		2SD601	TRANSISTOR CHIP	1	
Q715		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
Q771		2SD601	TRANSISTOR CHIP	1	
Q772		2SK198	TRANSISTOR CHIP	1	
Q773		2SK198	TRANSISTOR CHIP	1	(Q,R,S)
Q7301		2SD601	TRANSISTOR CHIP	1	(S,T)
Q7302		2SD1328	TRANSISTOR CHIP	1	(S,T)
Q7303		2SD1328	TRANSISTOR CHIP	1	(S,T)
			COMBINATION PARTS		
QR701		UN2214	TRANSISTOR-RESISTOR	1	
QR702		UN2213	TRANSISTOR-RESISTOR	1	
QR711		UN2212	TRANSISTOR-RESISTOR	1	
QR712		UN2212	TRANSISTOR-RESISTOR	1	
QR713		UN2211	TRANSISTOR-RESISTOR	1	
QR714		UN2214	TRANSISTOR-RESISTOR	1	
QR715		UN2214	TRANSISTOR-RESISTOR	1	
QR7312		UN2211	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R707		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R712		ERJ6GEYJ682	CHIP 1/16W 6.8K	1	
R713		ERJ6GEYJ681	CHIP 1/16W 680	1	
R714		ERD2FCG330	C.RESISTOR 2W 33	1	
R715		ERJ6GEYJ271	CHIP 1/16W 270	1	
R716		ERJ6GEYJ152	CHIP 1/16W 1.5K	1	
R717		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R718		ERJ6GEYJ754	CHIP 1/16W 750K	1	
R719		ERJ6GEYJ682	CHIP 1/16W 6.8K	1	
R720		ERJ6GEYJ822	CHIP 1/16W 8.2K	1	
R721		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R722		ERJ6GEYJ392	CHIP 1/16W 3.9K	1	
R723		ERJ6GEYJ183	CHIP 1/16W 180K	1	
R724		ERJ6GEYJ101	CHIP 1/16W 100	1	
R725		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R726		ERJ6GEYJ472	CHIP 1/16W 4.7K	1	
R728		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R729		ERJ6GEYJ471	CHIP 1/16W 470	1	
R731		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R732		ERJ6GEYJ330	CHIP 1/16W 33	1	
R733		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R734		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R736		ERJ6GEYJ471	CHIP 1/16W 470	1	
R737		ERJ6GEYJ274	CHIP 1/16W 270K	1	
R738		ERJ6GEYJ334	CHIP 1/16W 330K	1	
R739		ERJ6GEYJ471	CHIP 1/16W 470	1	
R740		ERJ6GEYJ473	CHIP 1/16W 47K	1	
R741		ERJ6GEYJ272	CHIP 1/16W 2.7K	1	
R742		ERJ6GEYJ272	CHIP 1/16W 2.7K	1	
R743		ERJ6GEYJ470	CHIP 1/16W 47	1	
R744		ERJ6GEYJ821	CHIP 1/16W 820	1	
R745		ERJ6GEYJ331	CHIP 1/16W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R750		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R756		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R757		ERJ6GEYJ222	CHIP 1/16W 2.2K	1	
R758		ERJ6GEYJ681	CHIP 1/16W 680	1	
R760		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R761		ERJ6GEYJ221	CHIP 1/16W 220	1	
R762		ERJ6GEYJ471	CHIP 1/16W 470	1	
R763		ERJ6GEYJ471	CHIP 1/16W 470	1	
R764		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R765		ERJ6GEYJ152	CHIP 1/16W 1.5K	1	
R772		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R773		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R774		ERJ6GEYJ333	CHIP 1/16W 33K	1	
R775		ERJ6GEYJ474	CHIP 1/16W 470K	1	
R776		ERJ6GEYJ105	CHIP 1/16W 1M	1	
R777		ERJ6GEYJ184	CHIP 1/16W 180K	1	
R778		ERJ6GEYJ105	CHIP 1/16W 1M	1	
R779		ERJ6GEYJ104	CHIP 1/16W 100K	1	
R792		ERJ6GEYJ120	CHIP 1/16W 12	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7302		ERJ6GEYJ392	CHIP 1/16W 3.9K	1	
R7303		ERJ6GEYJ182	CHIP 1/16W 1.8K	1	
R7304		ERJ6GEYJ392	CHIP 1/16W 3.9K	1	
R7305		ERJ6GEYJ822	CHIP 1/16W 8.2K	1	
R7306		ERJ6GEYJ471	CHIP 1/16W 470	1	
R7307		ERJ6GEYJ104	CHIP 1/16W 100K	1	
R7308		ERJ6GEYJ273	CHIP 1/16W 27K	1	
R7309		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7310		ERJ6GEYJ474	CHIP 1/16W 470K	1	
R7311		ERJ6GEYJ562	CHIP 1/16W 5.6K	1	
R7312		ERJ6GEYJ563	CHIP 1/16W 56K	1	
R7313		ERJ6GEYJ824	CHIP 1/16W 820K	1	
R7314		ERJ6GEYJ224	CHIP 1/16W 220K	1	
R7315		ERJ6GEYJ224	CHIP 1/16W 220K	1	
R7316		ERJ6GEYJ473	CHIP 1/16W 47K	1	
R7317		ERJ6GEYJ393	CHIP 1/16W 39K	1	
R7318		ERJ6GEYJ153	CHIP 1/16W 15K	1	
R7319		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R7321		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R7322		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R7323		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R7324		ERJ6GEYJ821	CHIP 1/16W 820	1	
R7325		ERJ6GEYJ821	CHIP 1/16W 820	1	
R7327		ERDS2TJ751	C.RESISTOR 1/4W 750	1	
R7328		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R7329		ERJ6GEYJ102	CHIP 1/16W 1K	1	
R7330		ERJ6GEYJ332	CHIP 1/16W 3.3K	1	
R7331		ERJ6GEYJ272	CHIP 1/16W 2.7K	1	
R7651		ERJ6GEYJ103	CHIP 1/16W 10K	1	
R7654		ERJ6GEYJ562	CHIP 1/16W 5.6K	1	
R7655		ERJ6GEYJ472	CHIP 1/16W 4.7K	1	
R7656		ERJ6GEYJ151	CHIP 1/16W 150	1	
R7657		ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
R7658		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R7659		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R7661		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R7662		ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R7663		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R7664		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
			TRANSFORMERS		
T703		EIV5EC013A	TRANSFORMER	1	
T704		EIV5EC006A	TRANSFORMER	1	
T710		EULBEF022	TRANSFORMER	1	
T752		EIS5EC005A	TRANSFORMER	1	
T753		EIS5EC007A	TRANSFORMER	1	
T7301		EIR7QG001B	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701		EVM3AGA00B23	V.RESISTOR 2K	1	
VR702		EVM3AGA00B23	V.RESISTOR 2K	1	
VR741		EVN3ACA00B14	V.RESISTOR 10K	1	
VR751		EVNE4AA00B53	V.RESISTOR 5K	1	
VR7301		EVN38CA00B14	V.RESISTOR 10K	1	
VR7326		EVN38CA00B52	V.RESISTOR 500	1	
VR7328		EVN3ACA00B52	V.RESISTOR 500	1	
VR7340		EVNE4AA00B14	V.RESISTOR 10K	1	
VR7344		EVNE4AA00B14	V.RESISTOR 10K	1	
VR7660		EVN38CA00B23	V.RESISTOR 2K	1	
			FILTERS		
X710		EFCH38MSP1	SAW FILTER	1	
X711		EFCS5R5MW5	FILTER	1	
X712		EFCS5R5MS5	FILTER	1	
X713		EFCS5R5MS5	FILTER	1	
X714		ELB5A016	FILTER	1	
X715		ELB5A043	FILTER	1	
X716		EFCA40R40M1	FILTER	1	
X717		ELB5A047	FILTER	1	
X751		EFCS5R74MS5B	FILTER	1	
X752		EFCS5R74MS5B	FILTER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VSC1788	SHIELD CASE (TOP)	1	
		VSC1789	SHIELD CASE (MAIN)	1	
		VSC1888	SHIELD CASE (BOTTOM)	1	
	■	VEP01299A	POWER C.B.A.		
			CAPACITORS		
C1001		VCK0040	C.CAPACITOR 220P	1	
C1003		VCK0040	C.CAPACITOR 220P	1	
C1004		VCK0040	C.CAPACITOR 220P	1	
C1006		VCK0040	C.CAPACITOR 220P	1	
C1007		VCK0044	C.CAPACITOR 1000P	1	
C1009		VCK0044	C.CAPACITOR 1000P	1	
C1010		VCK0044	C.CAPACITOR 1000P	1	
C1012		VCK0044	C.CAPACITOR 1000P	1	
C1013		VCK0044	C.CAPACITOR 1000P	1	
C1015		VCK0044	C.CAPACITOR 1000P	1	
C1016		ECQU2A224MN	P.CAPACITOR 250V 0.22U	1	
C1017		ECQU2A104MN	P.CAPACITOR 250V 0.100U	1	
C1018		ECES2GU820DU		1	
C1019		ECEA2AGE010	E.CAPACITOR 10V 1U	1	
C1020		ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1021		ECKD3D151KB	C.CAPACITOR 2KV 150P	1	
C1022		ECQE6473MZ	P.CAPACITOR 630V 0.047U	1	
C1023		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C1024		ECQB1H472KH	P.CAPACITOR 50V 4700P	1	
C1025		ECEA1HGE101	E.CAPACITOR 50V 100P	1	
C1026		ECEA1DFZ681X	E.CAPACITOR 20V 68U	1	
C1027		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1028		ECEA1AFZ331X	E.CAPACITOR 10V 330U	1	
C1029		ECEA0JEE331	E.CAPACITOR 6.3V 330P	1	
C1030		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1031		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1032		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1033		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1034		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1035		ECEA1CGE100	E.CAPACITOR 16V 10U	1	
C1040		ECQP1101JZ	P.CAPACITOR 125V 100P	1	
C1041		ECEA1DFZ681X	E.CAPACITOR 20V 680U	1	
C1043		ECCF2H121	C.CAPACITOR 100V 120P	1	
C1044		ECKW1H103KBN		1	
C1045		ECEA1CK100	E.CAPACITOR 16V 10U	1	
			DIODES		
D1001		ENB461D-05A	SURGE ABSORBER 460V	1	
D1002		S1WBA60	DIODE	1	
D1003		AP01CV2	DIODE	1	
D1004		MA178	DIODE	1	
D1008		MA185	DIODE	1	
D1009		ERD32-01	DIODE	1	
D1010		MA185	DIODE	1	
D1011		ERA82-004	DIODE	1	
D1012		ERA82-004	DIODE	1	
D1013		MA4130L	DIODE	1	
D1017		ERD32-01	DIODE	1	
D1018		MA2200B	DIODE	1	
D1019		MA165	DIODE	1	
D1020		VSD0002	DIODE	1	
D1021		ERA82-004	DIODE	1	
			IC		
IC1001		STK5337	IC	1	
			COIL		
L1001		ELF18D428	COIL	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L1002		ELC07D220	COIL 22U	1	
			CONNECTOR		
P1001		VJS1962	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1001		STRD1806	TRANSISTOR	1	
Q1003		2SD1330	TRANSISTOR	1	(R,S,T)
Q1005		2SB641	TRANSISTOR	1	(Q,R,S)
Q1006		2SC1384	TRANSISTOR	1	(R,S)
			RESISTORS		
R1001		ERC12GM334		1	
R1002		ERF2AK2R2	W.RESISTOR 2W 2.2	1	
R1003		ERG1SJ823	M.RESISTOR 1W 82K	1	
R1004		ERG1SJ823	M.RESISTOR 1W 82K	1	
R1005		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R1006		ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R1007		ERG3SJ683	METAL OXIDE 3W 68K	1	
R1008		ERW2PKR39T	WIRE WOUND 2W 0.39	1	
R1009		ERG1SJ181	M.RESISTOR 1W 180	1	
R1012		ERG12ANJ182	M.RESISTOR 1/2W 1800	1	
R1015		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1019		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R1020		ERX1SZJR16		1	
R1021		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R1022		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
			TRANSFORMER		
T1001		VLT0515	TRANSFORMER	1	
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	4	<!>
	■	VEP66019D	DIGITAL SCANNER C.B.A.		
			CAPACITORS		
C01		ECEA0JK470I	E.CAPACITOR 6.3V 47U	1	
C02		ECEA1HKN010I	E.CAPACITOR 50V 1U	1	
C03		ECUM1E104ZFM	CHIP 25V 0.1U	1	
C04		ECUM1E104ZFM	CHIP 25V 0.1U	1	
C05		ECEA1HK010I	E.CAPACITOR 50V 1U	1	
C06		ECEA1AKA470I	E.CAPACITOR 10V 47U	1	
C07		ECUM1H330JCN	CHIP 50V 33P	1	
C08		ECUM1H330JCN	CHIP 50V 33P	1	
C09		ECUM1H103ZFN	CHIP 50V 0.01U	1	
			DIODES		
D01		MA151WK	DIODE	1	
D02		MA151WK	DIODE	1	
D03		MA151WK	DIODE	1	
D04		MA151WK	DIODE	1	
D05		MA153	DIODE	1	
D06		SE303AY	DIODE	1	
			ICS		
IC01		UPD49HG88022	IC	1	
IC02		UPC324G2	IC	1	
IC03		NJM78L02AA	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COIL		
L01		ELT3K017A	COIL	1	
			CONNECTOR		
P01		VJP1229T	CONNECTOR(MALE) 2P	1	
			TRANSISTORS		
Q01		2SB710	TRANSISTOR CHIP	1	(Q,R,S)
Q02		2SB710	TRANSISTOR CHIP	1	(Q,R,S)
Q03		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q04		2SD601	TRANSISTOR CHIP	1	(Q,R,S)
			RESISTORS		
R01		ERJ6GMYJ470	CHIP 1/16W 47	1	
R02		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R03		ERJ6GMYJ123	CHIP 1/16W 12K	1	
R04		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R05		ERJ6GMYJ202	CHIP 1/16W 2K	1	
R06		ERJ6GMYJ244	CHIP 1/16W 240K	1	
R07		ERJ6GMYJ162	CHIP 1/16W 1.6K	1	
R10		ERJ8GCYK106	CHIP 1/8W 10M	1	
R11		ERJ6GMYJ105	CHIP 1/16W 1M	1	
R12		ERJ8GCYK106	CHIP 1/8W 10M	1	
R13		ERJ6GMYJ361	CHIP 1/16W 360	1	
R14		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R15		ERJ6GMYJ332	CHIP 1/16W 3.3K	1	
R16		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R17		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R18		ERDS2EJ6R8	C.RESISTOR 1/4W 6.8	1	
R20		ERJ6GMYJ104	CHIP 1/16W 100K	1	
R23		ERJ6GMYJ682	CHIP 1/16W 6.8K	1	
R24		ERJ6GMYJ102	CHIP 1/16W 1K	1	
R28		ERJ6GMY0R00		1	
			SWITCHS		
SW01		VSS0211	SWITCH	1	
SW02		VSP0221	SWITCH	1	
			CRYSTAL OSCILLATOR		
X01		VSX0199	CRYSTAL OSCILLATOR	1	
			BUZZER		
X02		VSQ0536	BUZZER	1	
	■	VEP66030A	PROGRAMMABLE REMOTE CONTROLLER C.B.A.		
			DIODES		
D1		LN66	DIODE	1	
D2		MA165	DIODE	1	
D3		MA165	DIODE	1	
D4		MA165	DIODE	1	
D5		MA165	DIODE	1	
D6		MA165	DIODE	1	
D7		MA165	DIODE	1	
D8		MA165	DIODE	1	
D9		MA165	DIODE	1	
			IC		
IC1		MN6011M	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C1		ECEA0GKS101	E.CAPACITOR 4V 100U	1	
C2		ECKF1H121KB	C.CAPACITOR 50V 120P	1	
C3		ECKF1H121KB	C.CAPACITOR 50V 120P	1	
C4		ECQB1H222KH	M.CAPACITOR 50V 2200P	1	
			COMBINATION PART		
QR1		UN1231	TRANSISTOR-RESISTOR	1	
			CRYSTAL OSCILLATOR		
X1		VSX0201	CRYSTAL OSCILLATOR	1	
	■	ENC87956	RF CONVERTER UNIT		
			IC		
IC1		LA7051	IC		
			TRANSISTORS		
Q1		2SC2570A	TRANSISTOR		
Q2		2SC3130	TRANSISTOR		
			DIODES		
D1		MA1075	DIODE		
D2		HSM276S	DIODE		
D3		MA166	DIODE		
D4		MA166	DIODE		
D5		MA166	DIODE		
			NOTE:		
			THE OTHER PARTS FOR		
			RF CONVERTER & ANTENA		
			BOOSTER UNIT ARE NOT		
			AVAILABLE AS SPARE PARTS.		
	■	VEP00K62A	CYLINDER DRIVE C.B.A.		
			CAPACITORS		
C2901		ECEA1VSN2R2	ELECTROLYTIC 35V 2.2U	1	
C2902		ECEA1VSN2R2	ELECTROLYTIC 35V 2.2U	1	
C2903		ECEA1VSN2R2	ELECTROLYTIC 35V 2.2U	1	
C2904		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2905		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2906		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2907		ECQV1H823JS	MYLAR 50V 0.082U	1	
C2908		ECUM1E473KBM	CHIP 25V 0.047U	1	
C2909		ECUM1E104KBM	CHIP 25V 0.1U	1	
C2910		ECEA1CKS100	ELECTROLYTIC 16V 10U	1	
C2911		ECEA1CKS100	ELECTROLYTIC 16V 10U	1	
C2912		ECEA0JKS220	ELECTROLYTIC 6.3V 22U	1	
			INTEGRATED CIRCUIT		
IC2901		AN3814K	IC	1	
			RESISTOR		
R2901		ERX12ANJR68	METAL OXIDE 1/4W 0.68	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P2901		VJP1232T		1	
P2902		VJP1927		1	
			MISCELLANEOUS		
		VSC1843	SINK HEAT	1	
		VMA6884	MAIN HOLDER	1	
	■	VEP00J52A	MECHANISM CONNECTION		
			C.B.A. CONNECTORS		
			CONNECTORS		
P1504		VJP1939	12P	1	
P1505		VJP1242T	2P	1	
			RESISTORS		
R1501		ERDS2TJ223	CARBON 1/4W 22K	1	
	■	VEP00H31A	REEL SENSOR C.B.A.		
			PHOTO TRANSISTOR		
			INTEGRATED CIRCUITS		
IC1501		ON2170		1	
			CONNECTOR		
			CONNECTORS		
P1506		VJP1242	2P	1	
	■	VXA2689	LED C.B.A. UNIT		
			DIODES		
D1501		GL450	PHOTO DIODE	1	
			MISELLANEOUS		
		VMD0911	LED HOLDER	1	
		VWJ0254	FLEXIBLE CABLE	1	
	■	VEP00K27A	TAKEUP PHOTO Tr C.B.A.		
			CAPACITORS		
C1502		ECKW1H102KB	CERAMIC 50V 1000P	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1503		ERDS2TJ222	CARBON 1/4W 2.2K	1	
			CONNECTORS		
P1503		VJS1936		1	
P1508		VJP1242T		1	
			TRANSISTOR		
Q1502		PN150NV	PHOTO TRANSISTOR	1	
			MISCELLANEOUS		
		VMD0645	PHOTO TR HOLDER	1	
	■	VEP00H35A	SUPPLY PHOTO Tr C.B.A.		
			CAPACITOR		
C1501		ECKW1H102KBN	CERAMIC 50V 1000P	1	
			TRANSISTOR		
Q1501		PN150NV	PHOTO TRANSISTOR	1	
			MISCELLANEOUS		
		VMD0645	PHOTO TR HOLDER	1	